IN THE CHANCERY COURT OF JACKSON COUNTY, MISSISSIPPI

MIKE MOORE; ATTORNEY GENERAL, EX REL; THE STATE OF MISSISSIPPI — PLAINTIFFS

V. — NO. 94-1429

AMERICAN TOBACCO COMPANY LIGGETT & MYERS, INC.; LIGGETT GROUP, INC.; CORR-WILLIAMS TOBACCO COMPANY; LAUREL CIGAR & TOBACCO COMPANY; LONG WHOLESALE; WIGLEY & CULP; R.J. REYNOLDS TOBACCO COMPANY; RJR NABISCO, INC.; LEWIS BEAR COMPANY; BROWN AND WILLIAMSON TOBACCO CO.; GENERIC PRODUCTS CORP.; HILL AND KNOWLTON, INC.; LORILLARD TOBACCO COMPANY; LOEWS CORPORATION; BATUS, INC.; MS MANUFACTURERS ASSOCIATION — DEFENDANTS

DEPOSITION OF MARY CURRIER, M.D.

Taken at the instance of the Defendants at Brunini, Grantham, Grower & Hewes, 1400 Trustmark Building, Jackson, Mississippi, on November 12, 1996, beginning at 9:00 a.m.

APPEARANCES:

CHARLES J. MIKHAIL, ESQ.
SCRUGGS, MILLETTE, LAWSON, BOZEMAN & DENT

COUNSEL FOR PLAINTIFFS

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EXHIBITS:

MARY CURRIER, M.D.,

having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. BIERSTEKER:

Q. Good morning, Dr. Currier. I'm Peter Biersteker. I represent R.J. Reynolds Company, and we're here for your deposition today in the Moore case. Before we begin, I want to know if you've been deposed before, apart from the record custodian deposition you gave in this case?

A. Yes, once.

Q. And on what occasion was that?

A. It was having to do with a hospital and a lawsuit within a hospital.

Q. Were you an expert witness in that case?

A. I was involved in investigation of the problem in the hospital.

Q. Was there -- what was the nature of the problem, just in general terms?

A. Infectious.

Q. They had an outbreak of some infectious disease in the hospital?

A. They had a person who was ill from an infection that she probably shouldn't have -- it

was a nosocomial infection probably, and that was what my testimony was about.

Q. How long ago was your deposition taken in that case, approximately?

A. Five years ago approximately.

Q. Do you know the name of the case? Do you know who the parties were?

A. I know the name of the hospital.

Q. What was the name of the hospital?

A. St. Dominics.

Q. Is that here in Jackson?

A. Yes.

Q. Do you know who the lawyers were that were involved in that case?

A. I don't remember.

Q. Have you ever testified at trial?

A. Once.

Q. Was that in the same matter?

A. It was as an expert, in Scott County, involving a salmonella outbreak.

Q. Did you testify on epidemiology in that case?

A. Yes.

Q. What was the name of that case? Do you remember?

A. I don't remember.

Q. Do you remember who any of the lawyers were who were involved in that case?

A. No. I'm sorry.

Q. Do you remember -- you said it was about five years ago? Or was that the deposition? I'm confused.

A. Right. This was -- the Scott County case was probably a year ago that I testified.

Q. You gave no deposition in that case? It was only a trial?

A. That's correct.

Q. Since you've been through this process and since you have able counsel, I don't know that I need to review too many of the deposition protocols, but I will, just briefly.

The first protocol is that it helps the court reporter if we take turns talking and we don't talk over the top of each other, so I will try to not start my question until after you've completed your answer. By the same token, I would appreciate it if you would let me finish my question before your answer. Is that all right?

A. Sure.

Q. Secondly, you need to answer audibly.

Shakes of the head are difficult for the reporter to take down, so answer yes or no instead of nodding your head.

A. Okay.

Q. If I ask a question and you don't understand it, please let me know, and I'll try to rephrase it so that you do understand it. If you don't tell me that you didn't understand the question, I'll assume that you did.

A. Okay.

Q. Is that also fair?

A. Sure.

Q. If for any reason during the course of the deposition you want to take a break for whatever reason, just let me know and I'll be happy to accommodate you.

MR. MIKHAIL: Peter, we would like to read and sign the deposition.

MR. BIERSTEKER: All right. That's fine.

Why don't we make this the first deposition exhibit.

[EXHIBIT NO. 1 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Dr. Currier, I hand

you what's been marked as Exhibit 1, which is the Notice of your deposition. Have you seen that document before?

A. Yes.

Q. As part of the Notice, we asked you to bring certain documents with you. And did you bring any documents with you today?

A. I did.

Q. You did? May I see what you brought?

MR. MIKHAIL: Let me say on the record, while she's looking for these documents, the documents she's brought with her and the ones that we are willing to share with you is without waiving the objection that we had in the pending motion for Protective Order or the enjoined -- the issuance of subpoena primarily because the documents are things that have been produced in discovery and that you all are aware of already. But we don't want her willingness to show these documents to you to be a waiver of the motion that we have made that remains pending before the Chancery Court.

MR. BIERSTEKER: I want to make sure I understand that, Charles. Are these documents, then, all the documents other than privileged

documents that are responsive to the items enumerated in the Notice?

MR. MIKHAIL: Well, first of all, there is no copy of a final version of any study prepared by Mary Currier. There is no such document. Sub 2-A, all documents reviewed by Mary Currier in connection with her testimony, I believe that is correct. You have documents with you.

THE WITNESS: Yes.

MR. BIERSTEKER: I can ask her.

MR. MIKHAIL: I want to make sure we're on the same wavelength.

MR. BIERSTEKER: Right.

MR. MIKHAIL: B would be similar to that. All right. C, it says all documents prepared by Mary Currier in connection with her testimony. Dr. Currier has not prepared any documents. She may have jotted down some notes, reviewing documents that she's relying on, just so that she could not have to memorize numbers and try to rely on her memory when she gives testimony, but she has not prepared or authored any documents in preparation for her testimony, and our objection stands on correspondence with

counsel. We will not be producing any correspondence or communication with counsel whatsoever.

MR. BIERSTEKER: All right.

THE WITNESS: You have a copy of my C.V.?

MR. BIERSTEKER: I do, yes. May not be the same as yours, but I have a copy.

THE WITNESS: Pardon?

MR. BIERSTEKER: I said it may not be the same as yours, but I have a copy.

MR. MIKHAIL: It was the one that was produced to you on August 15 which we obtained from Dr. Currier.

MR. BIERSTEKER: That's fine.

[COMMENTS OFF THE RECORD.]

Q. (By Mr. Biersteker) You had no other documents, then, responsive to the Notice request?

A. No, but I may need those in the deposition.

Q. If you do, we'll round them up. I just wanted a chance to look at them.

MR. BIERSTEKER: All right. Why don't we mark this as the next exhibit.

[EXHIBIT NO. 2 WAS MARKED AND MADE A

PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, I hand you what's been marked as Exhibit 2, which really has two parts. The first is a description of your expected testimony in this case, and the second part is your resume. I'd like to start with the resume, if I may. First, is the resume current and accurate?

A. Except that I no longer have a Maryland medical license.

Q. All right. Anything else?

A. Not that I can see.

Q. I see from looking at the resume that you have a masters in public health from Johns Hopkins University, and I wanted to ask you, what is public health?

A. Public health in practice or public health in general?

Q. Why don't we do both? Why don't you tell me first about public health in general.

A. The health of communities and populations as opposed to individuals.

Q. And what is public health in practice?

A. In Mississippi, it is providing services and interventions to prevent disease and improve

the health of the state.

Q. How do you improve the health of the state, other than by providing services and engaging in interventions?

A. Health education and health promotion activities would be other things.

Q. What distinguishes health education and promotion from interventions?

A. When I said interventions, I was thinking specifically about things that we do in epidemiology such as providing antibiotics to close contacts of meningitis cases or immunoglobulin to close contacts of hepatitis A cases to prevent disease.

Q. Is public health different from basic medical research?

A. I would say so, yes.

Q. How is it different?

A. We in the Health Department don't do studies about biological -- we don't do basic research. We do sometimes do surveys and questionnaires and studies about attitudes and beliefs or studies about the presence or absence of a risk factor for diseases, but we don't do clinical trials or animal research.

Q. Is the objective of public health different than the objective of basic medical research?

A. I think in public health we take the research that is done and try and use it in a practical manner as opposed to doing that basic research ourselves.

Q. Would public health -- try that again. Is it fair to say that the public health community's approach to health issues could be characterized as better safe than sorry?

A. Well, certainly a lot of what we do is educating people as to what the safer way of living is.

Q. If there's a question about whether or not a particular lifestyle choice might, in fact, be a cause of adverse health consequences in the population a reason for the public health community to stay its hand and remain silent?

A. I'm sorry. I don't understand the question.

MR. MIKHAIL: Could you repeat the question, because I didn't understand it either, Peter.

Q. (By Mr. Biersteker) Let me tell you what

I'm driving at, and then maybe it'll help. Earlier I asked you a question about is it fair to say that the attitude of the public health community's approach to issues is better safe than sorry and so that if there were a question about -- that perhaps a person doing basic medical research might have about whether or not there's a causal connection between lifestyle choice acts and point Y, that if the evidence rises to a certain level, the public health community might be more apt to say, Look, we don't have to dot all of our I's and cross all of our T's. We've got enough here to know that at least there's this question, and based on that question, we ought to act -- we ought to -- I haven't framed the question yet and I know it -- that based upon the evidence that we do have, we nonetheless ought to act. And, so, my question is: Is the public health community willing to act to try to prevent disease more quickly than, say, somebody who is engaged in basic medical research would be?

MR. MIKHAIL: I'm going to object to the form of the question. The question's being asked in the abstract, and I would object to the form. You can attempt to answer it the best you

can, but I do want to register an objection to the question.

MR. BIERSTEKER: Objection noted.

THE WITNESS: I think it depends on what the issue is. I don't think you could make a blanket statement one way or the other.

Q. (By Mr. Biersteker) Certainly not in each and every case. I just asked as a general tendency, is it more likely to act -- the public health community more likely to act on incomplete information than basic medical researchers?

MR. MIKHAIL: Objection to the form of the question.

MR. BIERSTEKER: I think it's silly, but go ahead.

MR. MIKHAIL: Peter -- before you answer the question -- you don't have to characterize the nature of my objections as silly or meritorious or any other way. The Case Management Order that we signed on to says we are allowed to object to the form of the question and that all other objections are preserved. I'm going to object to the form of the question when I think it's proper. And if you're going to characterize it in a certain way, then I think

we're going to have some trouble today.

MR. BIERSTEKER: I think we are because I don't see anything wrong with the form of the question.

MR. MIKHAIL: I can object to the form of the question and she can answer it. I'm not instructing her not to answer it.

MR. BIERSTEKER: All right.

MR. MIKHAIL: If you're going to continue characterizing counsel's objections -- let me finish what I have to say -- in a certain way, we're not going to get anywhere. Let's keep it civil and keep it proper.

MR. BIERSTEKER: I have no desire to keep it anything other than civil.

MR. MIKHAIL: I don't want to do this, Peter, but I have a right to object to the form of the question, and she can continue to answer the best she can unless instructed otherwise. So why don't you ask your question again and let's get these ground rules to begin with.

Q. (By Mr. Biersteker) As a general proposition, is the public health community more willing to act based upon incomplete information about the precise causes of illness than basic

medical researchers?

A. Well, first of all, I don't think basic medical researchers would usually act on their information. They would continue to do more research, if you see what I'm saying. I don't know. I've not really thought about that before. I really think it would depend on where you are and what group -- what public health group you're talking about.

Q. How about the Mississippi public health community?

A. I don't -- I don't know.

Q. What is PEER Review?

A. PEER Review literature is journals that are reviewed by experts who can criticize and take it back to the editor and say they do or don't believe this is a good article or a good study.

Q. Is the Mississippi Morbidity Reporter up here a journal?

A. No.

Q. What is epidemiology?

A. The study of disease in communities.

Q. Are you an expert in epidemiology?

A. To a degree.

Q. Could you explain that answer, please?

A. I -- I practice epidemiology and put it into practice, but I don't do in general -- although occasionally we do studies, like I said, I don't do epidemiologic studies and write papers, and I'm not an academic epidemiologist.

Q. Did you take courses in epidemiology in the pursuit of your master's degree at Johns Hopkins?

A. Yes.

Q. Did you take courses in epidemiology during medical school?

A. We had one preventive medicine course that included epidemiology.

Q. How many classes in epidemiology did you take at Johns Hopkins?

A. At least three; probably more.

Q. Were they -- those courses a year-long course or a semester? Do you remember?

A. We were in quarters, and each one was one quarter.

Q. You said that you practice epidemiology and put it into practice.

A. Uh-huh.

Q. What do you mean by that?

A. We, in our division, use studies that

other people have written to make decisions about things like food-borne outbreaks and meningitis cases and who gets prophylaxis, what to do about the hepatitis A.

Q. So, as I understand what you said is, based on studies done by others, then the State Epidemiologist's office determines what actions might be appropriate?

A. In response to outbreaks or whatever, yes.

Q. Does the State Epidemiologist's office conduct any epidemiological studies on-site?

A. We do occasionally, yes.

Q. About how many such studies has the office conducted over the last -- well, since your tenure there?

A. Oh, dear. We're working on one now that is a lab survey. I don't know if you would call it a study or not. It's a survey of the labs in the state to see what kind of bacterial culturing they do and what kinds of bacteria they look for in their cultures and what their capacity is, basically, and how much of certain kinds of bacteria they've found in some of their culturing. We did a study at one point that was

never published about how many adults over the age of 65 get flu shots. We did a -- we looked at Arsenic poisonings in the state. I don't know exactly how many, but it's not very many.

Q. Are there any others that you can remember?

A. We've done studies to look at the accuracy of our surveillance system, our disease surveillance system, going into hospitals and finding cases of particular kinds of diseases and then seeing how many have been reported to us.

Q. If I might interrupt --

A. I --

Q. I'm sorry. Go ahead.

A. I was just going to say, I can't remember any others offhand.

Q. You spoke about a disease surveillance survey. Does that survey have a name?

A. Well, our surveillance system, we have a Reportable Disease Surveillance System in the state.

Q. Is that what it's called, Reportable Disease Surveillance System?

A. Well, what is it called? Basically, yes.

Q. And I take it one of the studies you did was then to go to hospitals and to collect data on disease incidence to compare it to the survey information; is that right?

A. Uh-huh.

Q. Did you do that to determine whether or not the survey data you had obtained was accurate?

A. We did it to see if our surveillance system was sensitive.

Q. In what sense, sensitive?

A. To see how many of the cases that truly occurred we picked up through the surveillance system.

Q. Is the surveillance system supposed to be comprehensive?

A. By comprehensive do you mean --

Q. Is it supposed to pick up every --

A. -- get all the cases?

Q. Pick up all the cases in the state, yes.

A. It is, although we know for many diseases we don't get anywhere near all the cases. For some of them, the Class I diseases, we hope to get all or almost all of them because those are the diseases that we actually go in and

do something about as far as finding contacts and providing prophylaxis.

Q. What are Class I diseases?

A. Diseases that are reportable at first knowledge or suspicion of the diagnosis.

Q. Is there a list somewhere written down of Class I diseases?

A. There is, yes.

Q. Where is it written down?

A. Not with me. In our office.

Q. When the Mississippi State's Epidemiologist's office examines published studies to determine appropriate courses of action, does it evaluate the published studies curriculum?

A. You mean in order to make policy?

Q. Well, let me -- you base your policy and your activities on published epidemiological studies, right?

A. Yes.

Q. Before you decide what policy steps to take, do you critically evaluate the epidemiological studies upon which you're going to base your actions?

A. We usually base our actions on the position of other groups that have critically

evaluated the states such as the ACIP, Immunization Practices Advisory Committee, and the American Association of Pediatrics, and the Centers for Disease Control.

Q. So if it bears the imprimatur of another professional group, then you would tend to accept it?

A. We would consider it.

Q. Has there ever been an instance when the Mississippi Epidemiologist's office has decided that a particular epidemiological study was inadequate to support policy decisions?

A. We haven't based policy decisions on one study.

Q. Would it be inappropriate to do that?

A. I believe so, unless it was an enormous study that nobody could find any fault with.

Q. Have you ever seen an enormous study with which no one could find any fault?

A. Probably not.

Q. Have you ever conducted an epidemiological study yourself?

A. The ones we mentioned before, I was either involved or I did myself.

Q. And that was the flu shots and the

Arsenic and, to the extent it's an epidemiological study, the survey of the labs?

A. Uh-huh.

Q. Prior to becoming State Epidemiologist, did you conduct any epidemiological study yourself?

A. Some of those were during the time when I was medical consultant.

Q. Do you know what the formula is for computing the population attributable risk?

A. I can point it out in the books for you, but I can't remember it off the top of my head.

Q. Do you know what variables go into that formula?

A. Yes.

Q. What are they?

A. The relative risk associated with the exposure and the proportion of the population that is exposed.

Q. And the letter is called the prevalence?

A. Of the exposure, yes.

Q. I saw in your resume that for some time you taught at the University of Mississippi Medical Center; is that right?

A. A lot of us in the Division of

Epidemiology help with the preventive medicine course with medical students at UMC. It's not our own course; we just help the person that does it.

Q. Do you lecture to the students at all?

A. Occasionally.

Q. Could you give me a ball park estimate of how many times during the course of the course you would lecture?

A. Couple times.

Q. On what do you lecture?

A. I have talked to them about what we do in our office, just as sort of a -- the practice of preventive medicine, some of the options. I've talked to them about the preventive medicine residency program, and I've talked to them about injuries, unintentional injuries and intentional.

Q. Did you ever lecture on the subject of smoking?

A. No.

Q. I see that you're also a medical doctor. Do you have any specialty?

A. Preventive medicine.

Q. Do people get Board-certified in preventive medicine?

A. Yes.

Q. Is there -- do you have any other Board certifications?

A. No.

Q. For how long -- I'm a little confused by your resume, since it only has one date for each of your different occupations. Are the dates listed on your resume starting dates?

A. Yes.

Q. Are you continuing to occasionally lecture to the students at the University of Mississippi Medical Center?

A. Yes.

Q. Was your job as a medical consultant to the Mississippi State Department of Health a full-time job from July of 1988 --

A. Yes.

Q. -- forward? And did you stop serving as a medical consultant in June of 1993?

A. Basically, I do almost the same thing. The title just changed.

Q. All right. What are your duties as State Epidemiologist?

A. I'm supervisor for several people, and I act as sort of team leader for the Division. We have three epidemiology nurses, an environmental

epidemiologist, and infectious disease physician, and a chronic disease epidemiologist, and we work together on whatever is going on or basically where the need is at the time. We investigate outbreaks. We deal with individual cases of like some of the things I've mentioned before, meningitis, hepatitis A. We do surveillance in the Winter for influenza and in the Summer for vector form encephalitis and work with PR in letting people know about these things when they're around. I work with, and really everyone in our Division works with, the other programs in the office such as TB, HIV, STD, and immunizations to develop their manuals and their policies and answer questions out in the field.

Q. To whom do you report?

A. Dr. Hodgekiss. He's the Office Chief.

Q. Could you identify for me the principal projects on which you have worked since 1988?

A. Projects?

Q. Yes, in the State Epidemiologist's office. You talked about the survey on influenza, and I just want to know what the principal activities have been -- principal activities of yours have been since 1988, when you assumed this

position.

MR. MIKHAIL: Can you do that?

THE WITNESS: It's basically what I have done all along, is what I just stated, as well as working with Ellen Jones in Health Promotion and Health Education.

Q. (By Mr. Biersteker) Well --

A. It's not a project-oriented job.

Q. Have there been particular diseases or conditions that have been the focus of the work of the State Epidemiologist since 1988?

A. It depends on what's going on in the state at the time as to what our focus is.

Q. I just wanted to know what they are. I don't need to know --

A. I can give you our list of reportable diseases, if that would help.

Q. Well, does it? I just want to know what have been the major diseases or conditions that the State Epidemiologist's office has pursued since 1988.

A. As far as surveillance goes, the particular diseases that we have set up special systems for are influenza and encephalitis. As far as prevention activities go, the diseases that

take the most time are meningitis and hepatitis A.

Q. Are there any others that come to mind?

A. The most recent disease that we've spent more time than usual on is gastroenteritis caused by E-coli 015787 in the Meridian area.

Q. Has the State Epidemiologist's office undertaken any projects with respect to chronic disease since 1988?

A. We have worked with Ellen in looking at the Behavioral Risk Factor Surveillance System data, as far as helping them understand and looking at the data from that. We now have a chronic disease epidemiologist who is actually a Federal employee who's helping look at breast and cervical cancer, and we have started a Cancer Registry.

Q. When did you start the Cancer Registry?

A. They actively started collecting cases this calendar year.

Q. When did the State procure the services of this Federal chronic disease epidemiologist?

A. Last July -- or this past July, 1996.

Q. Is there anything else that you can remember that the State Epidemiologist's office has done with respect to chronic disease since

1988?

A. We have a Spinal Cord Injury Registry. The injury itself, of course, is not chronic, but the results are often chronic. That was started several years ago. I can't think of anything else.

Q. I take it, then, that since 1988 -- I'm sorry. Go ahead.

A. We have a hypertension program that actually was in a different office than ours until recently, and they're also involved in diabetes.

Q. Have there been any projects in the State Epidemiologist's office since 1988 that relate specifically to smoking?

A. No.

Q. Why not?

A. Most of the activities regarding smoking and smoking prevention were not in our Division.

Q. And those responsibilities fell to whom?

A. They're in the Division of Health Promotion/Health Education.

Q. And that's the Division in which Ellen Jones was?

A. Uh-huh.

Q. Have you worked with -- is its Ms. or

Dr. Jones? I'm not sure which.

A. Ms.

Q. Have you worked with Ms. Jones on anything other than an analysis of the Behavioral Risk Factor Survey?

A. I didn't actually analyze it. I've just looked at it with them to help understand what the statistics mean. We've worked together in general, looking at things that are going out to the public and just making sure they make sense. She has done that for us, and we've done that for her.

Q. You review each other's --

A. Sometimes, yes.

Q. Let's return to the front page of Exhibit 2.

A. Okay.

Q. And this describes your expert opinions. Have you seen this before?

A. Yes.

Q. When did you first see it?

A. Couple months ago.

MR. MIKHAIL: Just the best of your recollection.

MR. BIERSTEKER: I'd love to ask

Charles questions, but he never answers me.

Q. (By Mr. Biersteker) Does the Expert Disclosure Statement accurately summarize the opinions you are going to give at the trial of this lawsuit?

A. I think so.

Q. Does it completely describe the opinions you expect to give at the trial of this lawsuit?

A. I believe so.

Q. Have you done any specific work in order to arrive at these opinions?

A. I've reviewed the documents that I gave you earlier.

Q. Have you reviewed anything other than those documents?

A. No.

Q. Do you plan on doing any additional work to support your opinions?

A. I will probably continue to review those documents or things like that. For example, the Morbidity and Mortality Weekly Report, the MMWR, from CDC, from November 8th has smoking related articles in it, and I do plan to read those.

Q. Do you read the MMWR as part of your -- during the course of your performance of your

duties as State Epidemiologist?

A. Yes.

Q. So as I understand it, you will continue to read new literature that might come out that relates to the opinions you're going to offer at trial?

A. Yes.

Q. Are you going to go back and survey literature that was published before this year to augment the basis of your opinions?

A. Probably.

Q. How are you going to determine -- strike that. How are you going to identify the literature that you wish to review?

A. I don't know.

Q. Apart from reading additional published research, is there anything else that you plan on doing to support your opinions in this case between now and the time of trial?

A. I'm sorry. Can you ask me that again?

Q. Apart from reviewing additional literature, is there anything else that you plan to do to support your opinions prior to the trial of this case?

A. No.

Q. Do you think that you should review additional literature?

A. Yes.

Q. Why?

A. Because I'd like to be able to answer the questions in an intelligent way.

Q. Do you have doubts about -- let's try this again. Is it possible that your opinions might change?

A. No.

Q. Why not?

A. Because I have read the opinions of experts in the field of basically tobacco epidemiology, and I rely on their expert opinions, such as in the 1989 Surgeon General's Report.

Q. Have you been asked to do any additional work beyond that which you've already done?

A. By whom?

Q. Charles Mikhail or plaintiff's counsel.

A. No.

Q. I want to walk through with you, if I might, the different parts of the description of your testimony, and the first part I'd like to focus on is the middle paragraph of this statement.

It appears that you're going to offer some testimony related to the prevalence of smoking; is that right?

A. Yes.

Q. Do you know what the prevalence of smoking is in the Mississippi Medicaid population?

A. No.

Q. Do you know what the prevalence of smoking is in the Mississippi Medicaid population for any year?

A. No.

Q. Do you know what the prevalence of smoking is among employees of the State of Mississippi?

A. No.

Q. Do you know that information for any year?

A. No.

Q. Do you know the prevalence of smoking in the recipients of unfunded care at different hospitals in the State of Mississippi?

A. No.

Q. Do you know that for any year?

A. No.

Q. If -- is it possible, then, to compute a

population attributable risk for the Mississippi Medicaid population in any year?

A. Sure.

Q. I thought you told me earlier that one needed to know the prevalence of smoking in a population as one of the variables that enters into the calculation, right?

A. Yes.

Q. And if you don't know that, how can you make the calculation?

A. You can estimate the prevalence by knowing the demographics of the population and using the prevalence obtained from, say, the Behavioral Risk Factor Surveillance System or the Cancer Prevention Survey.

Q. Well, the Behavioral Risk Factor Survey doesn't include information, does it, on whether somebody's on Medicaid or not?

A. No.

Q. Does it include information about whether somebody's a State employee or not?

A. No.

Q. Does it include information on whether somebody's a recipient of unfunded hospital care?

A. No.

Q. Does the Cancer Prevention Survey contain any of that information?

A. No. Not that I know of. I'm not -- actually, I'm not sure about that.

Q. Without actual data, is there any way to determine whether or not the estimates made of smoking prevalence in any of those populations are accurate?

A. You can estimate the prevalence pretty accurately. It's -- actually, the Behavioral Risk Factor Surveillance System data is probably an underestimate of smoking in the Medicaid population, to be real honest.

Q. How do you know that?

A. Well, one way we know it is the -- Ellen Jones and several other people went to the Delta -- I believe it was in 1993 -- and actually were concerned because the Behavioral Risk Factor Surveillance System depends on whether or not you have a telephone. And we know that in the Delta there is a proportion of people who don't have telephones, so they were concerned that there might be an underestimate of some of the health behaviors that we were looking at in the Behavioral Risk Factor Surveillance System in the

population without telephones, or we don't know what that is. So they went and surveyed people face to face as opposed to by phone to see if the Behavioral Risk Factor data was accurate. And one of the things that was found was the population without funds actually had a higher smoking prevalence than was found in the BRFSS data.

Q. Was that on an age-adjusted basis?

A. No. It was just a pretty informal survey.

Q. How many people were included in that survey?

A. I'm not sure, but it's among the documents that I gave you.

Q. If you want to take a look, you may.

MR. MIKHAIL: If you need a couple minutes to look at that, maybe it would be a good chance to take a break and have her look through it. Or is it something you can refer to right away?

THE WITNESS: If I can find the piece of paper with the pink slip on it. Here it is. 533 person-to-person surveys.

Q. (By Mr. Biersteker) Were the people who participated in that person-to-person survey

randomly selected?

A. They were questioned in a shopping center parking lot.

Q. The answer to my question, I take it, is no?

A. Correct.

Q. What proportion of the people in the Delta don't have phones?

A. About 20 percent.

Q. Is that people or households?

A. People.

Q. You mentioned earlier that you thought the BRFSS data underestimated smoking in the Medicaid population.

A. That's just a guess.

Q. Wouldn't you expect the prevalence of smoking in the Mississippi Medicaid population to be lower than it is in the general population?

A. Why?

Q. Do you have an expectation?

A. I do.

Q. And what is it?

A. That it would actually be higher than the general population.

Q. And my question is, why?

A. Because if you look at smoking prevalence data, it actually goes down with education level, and my expectation would be that the --

Q. The more educated you are, the less likely you're going to smoke?

A. Correct.

Q. I'm sorry. Go ahead. Did you have something?

A. I was going to say, my expectation would be the Medicaid population had a lower education level than the general population.

Q. Smoking is also more common in men than in women, isn't it?

A. Yes.

Q. To what are you referring there, Doctor? A summary of the BRFSS data, I see. Maybe the -- go off the record for a minute.

[OFF THE RECORD.]

[SHORT BREAK.]

MR. MIKHAIL: We just wanted to make one thing clear for the purposes of the record. And if my brief statement opens up questions or you wish to explore what I have to say further with Dr. Currier, she's the witness, and I don't

want to fall into the trap of testifying, but I just want to make sure that it's clear.

Statements were made in response to questions that you made about documents she's reviewed or relied on, and I think at one point something was said to the effect that they're here. They're with me. There are other materials as described in the 26 (b)(4) statement that are obviously not with her, such as scientific and medical literature, such as other Surgeon General Reports. I think one of them is here. And I'm not going to go through the whole list, but I do want the record to reflect that the 26 (b)(4) statement does reflect that she has reviewed and is relying on material that is not physically with her today, so there won't be any misunderstanding.

MR. BIERSTEKER: I do have a few questions. We can do this while we're waiting for the copies to be made.

MR. MIKHAIL: That's fine.

Q. (By Mr. Biersteker) How did you go about selecting the materials that you would bring with you as opposed to the materials that you left behind?

A. I brought the things that I have already

looked at.

Q. Are these the only materials that you have examined so far?

A. These and the ones that are being copied.

Q. How did you go about identifying those materials?

A. I chose things that were general as far as going over the whole field of chronic disease and smoking epidemiology as well as Mississippi statistics.

Q. Yes, I know, but there's probably a greater wealth of information than that that you've brought.

A. I had these handy.

Q. These were in your office?

A. The top two were. The Surgeon General's Report wasn't.

Q. The top two is the Chronic Disease Epidemiology and Control, by Brownson, Remington, and Davis?

A. Yes.

Q. All right. And the other top one is Vital Statistics Mississippi 1995?

A. Yes.

Q. Are there any particular -- well, there is no other particular article or book or other piece of scientific and medical literature that you've reviewed and relied upon to date that you can remember, is there?

A. No.

Q. The document goes on to discuss various studies, reports, and/or surveys. Do you see that reference?

A. Yes.

Q. Which specific studies, reports, and/or surveys have you reviewed?

A. I've looked at some of the Behavioral Risk Factor Surveillance System data that was in the folder that you're having copied.

Q. For which years do that data exist?

A. What I have is '91 through '95.

Q. And those are the years that you looked at?

A. Yes.

Q. Anything else besides the Behavioral Risk Factor Surveillance System data?

A. I have a few pages from the summary of the Youth Risk Behavior Survey.

Q. Do you know which year that was

conducted?

A. The pages that I have are from 1985, I believe.

Q. We'll check when it comes back. Are there any other studies, reports, and/or surveys that you have reviewed or are relying upon relating to your opinions in this case?

A. That I have already looked at?

Q. Yes, ma'am.

A. A couple of the pages that you're having copied were additional analysis of vital records data for Mississippi.

Q. Any other studies, reports, and/or surveys that you have reviewed or are relying upon so far?

A. Not that I can remember, but they would be in those folders.

Q. Are there -- I apologize if I've asked you this before. Are there any particular scientific or medical articles or books that you intend to go and examine after we're finished here?

A. I think before you asked me if I had a plan.

Q. Right.

A. I will probably look at other Surgeon General's Reports. Beyond that, I don't know.

Q. The only Surgeon General's Report that you've examined to date is --

A. 1989.

Q. And only portions of that?

A. Correct.

Q. Any other particular articles or books from the scientific and medical literature that you know now you might want to examine?

A. I don't know.

Q. You don't know of any others?

A. I don't know what else I will look at.

Q. By the same token, are there any surveys or other data compilations that you know exist that you intend to look at but haven't looked at so far?

A. I'm sure there are others and I will -- I'm sure I'll be looking for them, but I don't know what they are currently.

Q. The Expert Disclosure Statement also says that you have reviewed information concerning this case. What does that refer to?

MR. MIKHAIL: I would object to the form of the question in this regard: I believe

the paragraph three says expected to rely on. It does not say that she has reviewed.

MR. BIERSTEKER: Well, she's expected to rely on her review of information concerning this case.

Q. (By Mr. Biersteker) Have you reviewed any information concerning this case?

A. I would think everything I've reviewed regarding smoking epidemiology concerns this case, but that's all.

Q. And everything you've reviewed concerning smoking epidemiology are the materials we've already discussed?

A. Correct.

Q. Is there anything in addition?

A. That I have already reviewed?

Q. Yes, ma'am.

A. No.

[COMMENTS OFF THE RECORD.]

[EXHIBIT NO. 3 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. Doctor, have you ever had contact with Leonard Miller?

A. I don't remember if I've actually met him or not. I think that I have.

Q. All right. Have you spoken to him on the phone, separate and apart from any physical meeting you may have had?

A. I don't think so.

Q. What -- did you discuss anything with Dr. Miller?

MR. MIKHAIL: Do you know who he's talking about, Leonard Miller?

MR. BIERSTEKER: Leonard Miller. We'll ask about Vince, too.

MR. MIKHAIL: I just didn't want her to be confused.

THE WITNESS: I can't remember if I have actually spoken to him or just heard him spoken of.

Q. (By Mr. Biersteker) All right. Have you had any contact with Dorothy Rice?

A. No.

Q. Have you had any contact with Professor David Burns?

A. Yes.

Q. Describe those contacts for me.

A. I've spoken with him on the phone several times. He was working on interpreting or examining or analyzing data from several sources

in Mississippi that we were trying to get for him.

Q. Did you get data of one kind or another for Mississippi at his request?

A. Yes.

Q. What data did you provide to him?

A. I didn't actually provide it personally, but it did -- and I'm not sure if it actually came through the Health Department or was given to Dr. Burns eventually when he got it, but there was some Medicaid data, some University of Mississippi data, I believe, and some employees' insurance data.

Q. Do you know what kind of data were provided?

A. Cost and illness data, as I understand it. I didn't actually look at it.

Q. Were they data tapes?

A. I don't know.

Q. Did you provide any other data to Dr. Burns?

A. I think he probably has the vital records data as well, but I'm not sure about that.

Q. Anything else?

A. I don't know.

Q. What did you -- apart from fielding

requests for data, what else did you discuss with Dr. Burns?

A. That's basically been the extent of our conversation.

Q. Would he call and basically ask: Send me data on Medicaid?

A. Right, where is it?

Q. Do you know for which years the data that you provided?

A. That was provided?

Q. Yeah, that was provided to him, to which years it pertained?

A. I'm not sure.

Q. Did you keep copies of any of the materials you sent to Dr. Burns?

A. No.

Q. Have you had any contact with Professor Wendy Max?

A. Not that I recall.

Q. Have you had any contact with Zulan Zang (phonetic) or Joan Bartlett?

A. Not that I recall.

Q. Any contact with Professor Nevotni (phonetic)?

A. I believe I've met him, yes.

Q. How did you meet him?

A. At a meeting in Atlanta at CDC.

Q. Was this a -- well, what was the meeting about?

A. Cost of -- cost to the State of smoking-related illnesses.

Q. Who was at the meeting?

A. That's where -- I don't think Lynn Miller was actually at that meeting. I think he was just talked about at that meeting. I believe Dr. Nevotni was there. Alan Penman was there, who at the time was an EIS officer with us.

Q. Is he the chronic disease epidemiologist?

A. Yes. And at that time, he was an EIS officer in the CDC. Oh, who else? Dick Johnson may have gone, but I don't recall.

Q. Who is Dick Johnson?

A. He's the person in Vital Records at the Health Department.

Q. Did you have this meeting before or after you provided the data to Dr. Burns, or neither? May have provided some before and some after, I guess.

A. In the middle of -- probably before, but

certainly he didn't have all the data at that point.

Q. When did the meeting occur? Approximately. Was it Winter? Was it this year or last year or --

A. Probably Fall of '94, but I don't remember exactly.

Q. It wouldn't have been as recently as last Fall, 1995?

A. No.

Q. What did you discuss at your meeting?

A. I mostly listened.

Q. What was discussed at the meeting?

A. How to go about best estimating the cost of smoking-related illness to states.

Q. Could you describe the substance of those conversations, please?

A. A lot of discussion about what data was available and where to best get smoking prevalence data and things related basically back to cost estimates.

MR. BIERSTEKER: Could you read that answer back?

[PREVIOUS ANSWER READ BACK.]

Q. (By Mr. Biersteker) Did the participants

at this meeting think it was important to have smoking prevalence data for the specific populations at issue?

MR. MIKHAIL: Object to the form, but you can answer.

MR. BIERSTEKER: I can do it better.

Q. (By Mr. Biersteker) Did the participants think it was important to have smoking prevalence data specific to the Mississippi Medicaid population?

MR. MIKHAIL: Still object to the form, but you can answer it.

THE WITNESS: They thought it was important to have the most accurate data that was available used in their computations. I don't know if they talked about that specifically or not.

Q. (By Mr. Biersteker) Are there any data on smoking prevalence in Mississippi, Medicaid population specifically?

A. Not specifically related to Medicaid population, no.

Q. Are there any data related specifically to smoking prevalence in the State employee population?

A. Not that I know of.

Q. Is the same true of the recipients of unfunded care at various hospitals in the State?

A. Yes.

Q. I believe you referred to other data or data sources that may have been discussed at this meeting. Do you recall anything specifically about discussions relating to other data sources?

A. I think they talked about -- I don't know. They may -- I think they talked about CPS data. I don't know if they meant -- thinking back on it, I don't know if they meant -- I'm making guesses at my memory. I'm sorry.

Q. All right. That's fair. Is there anything that might refresh your memory?

A. Time warp.

Q. Did you have notes?

A. No.

Q. You referred, also, I believe -- well, strike that. What did you mean by things relating back to costs?

A. Just talking about all the kinds of information they were going to need to get out what the cost was most accurately.

Q. And what information did they need in

order to do that?

A. The actual expenditures by the State of Mississippi, the demographics of the populations. I don't -- I don't remember what else.

Q. Did they want the cost data disaggregated in any way?

A. Can you --

Q. Did they want it divided up, or was it enough to know the State of Mississippi spent --

A. Oh, no.

Q. -- a million dollars in 1995 on Medicaid?

A. No, they wanted it divided up by illness and demographics, things like that.

Q. By demographics, do you mean anything other than age, race, and sex?

A. I don't think so.

Q. Was this the only meeting that you had concerning estimates of health care costs incurred by the State of Mississippi for Medicaid, State employees, or unfunded hospital care?

MR. MIKHAIL: Would you repeat the question?

Q. (By Mr. Biersteker) Is this the only meeting that you had that related to developing

estimates of health care costs attributable to smoking incurred by the State of Mississippi for Medicaid, State employees, or unfunded hospital care?

MR. MIKHAIL: I object to the form because when you say "you had," with whom?

MR. BIERSTEKER: Well, has she had any other dealings with this subject.

MR. MIKHAIL: She just finished describing a meeting she participated in or attended at the CDC.

MR. BIERSTEKER: Right.

Q. (By Mr. Biersteker) And now I want to know if there were any other meetings or discussions you had about that same general topic, apart from the phone conversations with David Burns you've already described and the meeting.

A. That was the only meeting I attended, that included CDC people.

Q. Have you met on the subject other than with CDC people?

A. I met with -- as well as Dr. Thompson -- with Lee Young and people from Medicaid and the University Hospital and employee health insurance regarding -- I'm sorry. That was not about cost.

It was about document --

Q. Production?

A. Right, yeah.

Q. No. Well, have you had any other meetings or discussions concerning estimates of health care costs paid by the State of Mississippi on account of smoking?

A. Gosh, I don't remember. Alan and I met several times to figure out how we were going to get the information that David Burns wanted.

Q. And Alan refers to Dr. Penman?

A. I'm sorry. Yes.

Q. Just to wrap it up, were there any other discussion or meetings that you had about this subject that you can remember?

A. Not that I can remember.

Q. Let me see if -- this may help or further confuse matters. It's a document that's been marked Exhibit 3 to your deposition, and it -- it is a letter, appears to be a letter from somebody at the Centers for Disease Control to Dr. Thompson here, the Mississippi State Department of Health. And I just want to ask you, there's a reference in the second paragraph, the paragraph states, quote, "We are currently providing

technical assistance to your State Epidemiologist, Mary Currier, M.D., and other members of your staff regarding this innovative methodology and its applicability to smoking attributable economic costs as reflected in your state's Medicaid expenditures, unfunded indigent care costs, and State employee insurance costs," close quote. Did I read that accurately?

A. I believe so.

Q. What technical assistant -- what assistance did the Centers for Disease Control provide?

A. Basically they're developing the methodology for estimating costs, and what we were doing is providing the data that they needed in order to come up with the figures for Mississippi.

Q. This letter -- well, first of all, do you know what the reference to other members of your staff pertains to?

A. I can guess.

Q. Do you have an understanding of what that refers to other than a guess? If it's just a guess, I don't want to know.

MR. MIKHAIL: Don't guess.

THE WITNESS: Okay. I won't guess.

Q. (By Mr. Biersteker) Do you have -- well, I'm going to ask you to now. Who do you think it might be?

A. Alan Penman and Dick Johnson.

Q. This document is dated November of 1995?

A. Uh-huh.

Q. Were you still providing data to Dr. Burns as late as November of 1995 or to the CDC, for that matter?

A. I don't know.

Q. To your knowledge, is there anything that you have done in order to assist in developing damage estimates in this case other than provide data to Dr. Burns?

A. Basically that's what we've done, is provide data, yes.

Q. Is the same true of Dr. Penman and Dick Johnson?

A. I believe Dick actually looked at the data tapes to make sure they made sense, if it was data tapes. I think he did look at some data tapes. I'm not sure. I don't recall. And he may have -- I don't know if he sent in his disks or data tapes, but that's all we've done, yes.

Q. Returning to smoking prevalence, women

constitute a significant majority of Medicaid recipients, don't they?

A. I believe so.

Q. More so -- there are more women on a percentage basis who participate in Medicaid than there are the general population; is that right?

A. I believe so.

Q. Blacks in Mississippi smoke less than whites, don't they?

A. African-American women do, yes.

MR. BIERSTEKER: Why don't we mark as Exhibit 4 the document to which the doctor appears to be referring.

[EXHIBIT NO. 4 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, is this the exhibit to which you were referring, Exhibit 4?

A. Yes.

Q. A disproportionate percentage of Medicaid recipients are black in Mississippi; isn't that right? Or African-American, whichever term you prefer.

A. Yes.

Q. The elderly -- by that, I mean over age 65 -- smoke less than other age groups of adults,

don't they?

A. Yes.

Q. Again, you're referring to a chart in Exhibit 4?

A. Right.

Q. A disproportionate number of Medicaid recipients in Mississippi are over age 65, aren't they?

A. Actually, I believe people who are over 65 are on Medicare.

MR. MIKHAIL: Would you be able to repeat the last question before the last one about over 65?

[PENDING QUESTION READ BACK.]

MR. BIERSTEKER: Why don't we mark this as five.

[EXHIBIT NO. 5 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, I've marked as Exhibit 5 an excerpt from -- I didn't want to carry the whole thing -- a U.S. Department of Commerce National Technical Information Service document entitled Medicaid Statistics Program and Financial Statistics, Fiscal Year 1993. And if you would, Doctor, turn to pages that I numbered

97 and 98 in this document. It's actually the second page in, I believe. And if you look down, it's table 25 to the Atlanta Region IV. You find the state of Mississippi there. Do you see where I am?

A. Yes.

Q. And if you read across, it breaks out Medicaid recipients by age on that page, and the table continues on onto the following page. And there are, as you can see, in the far right-hand column of the exhibit on page 97, 31,190 Mississippians age 65 to 74 on Medicaid; is that right?

A. That's what this says, yes.

Q. And if you turn to the next page, it indicates that there are 30,497 Medicaid participants in Mississippi age 75 to 84?

A. Yes.

Q. And for age 85 and older, there were 19,747 --

A. Yes.

Q. -- Medicaid recipients. Now, on the first page, page 96, it gives a total number of Medicaid recipients in Mississippi, 504,498; is that right?

A. Yes.

Q. Now, I've done the math. You can check if you want at a break. If I haven't done it right, my examination is pretty worthless. But when I add up the numbers of people over age 65 who participate in Medicaid and divide that by the 504,000, I come up with something slightly in excess of 16 percent of the Medicaid recipients are over age 65.

A. Uh-huh.

Q. Do you know what percentage of the Mississippi population in general is over age 65?

A. No, but I can look it up in here.

Q. Would you please?

A. I can give you the projected population 65 and over, not as a percentage but as a raw number.

Q. Are the totals there so that you could calculate a percentage?

A. Yes.

Q. What are the total over aged 65?

A. 323,369.

Q. And what is -- for what year is this?

A. This is projected for 1995, projected probably from the 1990 --

Q. Census data?

A. -- census data.

Q. What's the total population?

A. 2,693,053.

Q. I come up with about 12 percent. Does that comport with your calculation?

A. Yes.

Q. So based on these statistics, would you agree that the Medicaid population consists of a disproportionate number of individuals over age 65, compared to the general Mississippi population?

A. It is a little more than the general population, yes.

Q. Is it also true that the young, people under age 24, for example, smoke less than other age groups except the elderly?

A. So you're saying 18 to 24 year olds, or are you talking about adolescents as well?

Q. Well, the data you're referring to is the BRFSS data, B-R-F-S-S?

A. We call it BRFSS.

Q. I think I will I stick with my pronounciation. I was referring to 18 to 24 year olds, adults.

A. They smoke slightly more than those people over 65.

Q. Right. But --

A. It looks like it's a little bit less than the average for population as a whole.

Q. Except the ages?

A. Right.

Q. A disproportionate number of Medicaid recipients are under the age of 24, aren't they?

A. Have you done these calculations as well?

Q. I have. Actually, under the age of 21. If you'll look at, again, pages 96 in Exhibit --

MR. MIKHAIL: Five.

Q. (By Mr. Biersteker) -- 5.

A. That would be my guess anyway, yes.

Q. You can add up the participants from age zero through 20?

A. Yes.

Q. Which is what I did. And, again, if my math is wrong -- but according to my calculations, I got about 53 percent of the Medicaid recipients are under the age of 21.

A. Uh-huh.

Q. That would be a higher percentage than

would be reflected in the Mississippi population generally in that age group, wouldn't it?

A. Yes.

Q. The never married smoke less than any other marital group, don't they?

A. I don't know, and I don't think I have that with me. I do. Here it is. What year are we looking at? Any year in particular?

Q. I was looking at 1992. If you have data for more years, that's fine.

A. Yes, it's less than the population in general.

Q. Right. And it's less than for any other marital status group as well?

A. Yes.

Q. A large percentage of Medicaid recipients are unmarried, aren't they?

A. As I understand it.

Q. It's a qualification to receive Aid to Families with Dependent Children that you be a single-parent household, isn't it?

A. I don't know.

Q. Would you agree that most Mississippi -- strike that. Would you agree that a disproportionate percentage of Mississippi

Medicaid recipients are likely to be black, female, and either over the age of 65 or under the age of 20?

A. I would agree with -- it is my understanding that a disproportionate portion of the Medicaid population is African-American, young, and unmarried. I don't know about the over 65.

Q. We reviewed that data, didn't we?

A. Right, but I don't know that they're single and female and unmarried.

Q. Don't these data suggest that smoking prevalence in the Medicaid population is likely to be lower than in the Mississippi general population?

A. I don't know. It seems that there's evidence in both directions. As you pointed out, never married has -- the people who are never married have a lower proportion of smokers, according to BRFSS data. On the other hand, if you look at the people with no telephones and the questions that we ask them -- granted, I don't know how many of those were Medicaid. It may be that the general population smokes more than we think it does because we have such a -- in other

words, it may be that the BRFSS data underestimates the smoking in the general population.

Q. Well, BRFSS was designed to be representative of the Mississippi population, wasn't it?

A. It was designed to be as representative as it could be by a telephone survey, yes.

Q. Do you think the BRFSS data are unreliable?

A. I think they're very reliable. I do think, though, that it doesn't represent the people without phones very well.

Q. Are the data that resulted from this person-to-person survey of phoneless individuals in a parking lot in the Delta reflected in any of the documents you produced? And, if so, I'd like to mark that as an exhibit.

A. Yes. Actually, it's not the data. It's a summary.

Q. All right, a summary.

A. It would be -- I only got one file folder. There should have been another one.

Q. It's underneath your books there.

A. Oh, sorry. It's not in here even.

Let's see. Here it is.

MR. BIERSTEKER: Why don't we mark that as Exhibit 6 for the record.

[EXHIBIT NO. 6 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Let's talk for a moment about diabetes. Based upon the BRFSS data, isn't diabetes more prevalent in women than in men in Mississippi?

A. I don't know. I have not looked at that.

Q. Why don't I provide you with Exhibit 7 --

[EXHIBIT NO. 7 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) -- which purports to be a summary of the 1992 BRFSS data, and I'm referring to the tabulation on page 21. You see diabetes in the second to the last column?

A. Yes.

Q. Doesn't it show that diabetes is more prevalent in females than in males in Mississippi?

A. Yes.

Q. That diabetes is also more prevalent in blacks than in whites in Mississippi?

A. Yes, remembering these are all self-reported. It's knowledge of having diabetes.

Q. How does that matter?

A. It probably doesn't.

Q. Diabetes is also more prevalent in individuals over age 65, right?

A. Yes.

Q. And it's more prevalent in people who have less than a high school education?

A. Yes.

Q. And it's more prevalent in people earning $20,000 a year or less, right?

A. Yes, that's how it looks.

Q. Let's talk about being overweight. Women are more likely to be overweight in Mississippi than men, correct?

A. Yes.

Q. And blacks are substantially more likely to be overweight than whites?

A. Yes.

Q. According to this data. Once again, people with less than high school education are more likely to be overweight; is that right?

A. Yes.

Q. Let's turn to sedentary lifestyle.

Women are more apt to have a sedentary lifestyle than a man, but not by a large margin; is that right?

A. Yes.

Q. Blacks are more likely than whites to be sedentary; is that correct?

A. Yes.

Q. Not surprisingly, individuals over age 65 are more sedentary than people under age 65, right?

A. Yes.

Q. People with less than a high school education are more sedentary than any other educational group; is that right?

A. Yes.

Q. And people with income less than $15,000 a year are also more likely to be sedentary, correct?

A. Yes.

Q. And, in fact, those with income less than 10,000 are even more likely to be sedentary?

A. Yes.

Q. Let's take a look at high blood pressure on this chart. Women are significantly more likely than men to have high blood pressure,

aren't they?

A. Yes, or to know about it.

Q. Well, again, we earlier talked about the difference between self-reported and actual, and you indicated you didn't think it was material. Do you think it's material here?

A. Well, I don't know. I don't know if the difference here is because women are more likely to have high blood pressure or women are more likely to get their blood pressure checked.

Q. Do you have any reason to believe that the problem is more acute for high blood pressure than it is for diabetes or being overweight or being --

A. Well, it's easy to know if you're fat. You don't have to go to a doctor for that. And I don't -- I'm just saying I don't know.

Q. Well, actually, Doctor, isn't --

A. There is a formula, yes.

Q. There is a formula for computing whether someone is overweight or not, isn't there?

A. Yes.

Q. It's 20 percent in excess of the ideal weight for your age?

A. But you can know what your weight is by

weighing yourself at home.

Q. But fat is different and more relative characterization than the definition of --

A. You're correct. I beg your pardon.

Q. Is there any reason to believe, again, that the high blood pressure statistics depart from actual any more or any less than any other statistics contained in this table?

A. I don't know.

Q. I'm not sure I had an answer to the question. Let me ask again. I'm not doing it to be difficult. I just can't remember. The data do reflect, do they not, that blacks are more likely to have high blood pressure than whites?

A. Yes.

MR. MIKHAIL: The data's reflected in the page she's looking at on Exhibit 7.

MR. BIERSTEKER: That's what we're talking about.

MR. MIKHAIL: I wanted to make sure the record is clear, not in general terms.

Q. (By Mr. Biersteker) The BRFSS data from 1992 also reflect that high blood pressure is also more prevalent in people with less than a high school education by a wide margin, correct?

A. Yes.

Q. And also more prevalent with individuals with income less than $10,000, right?

A. Yes.

Q. Isn't -- well, let's look at cholesterol, and then I think we may be done. The data reflect that blacks are much less likely to have had their cholesterol checked than whites; is that right?

A. Yes.

Q. And that individuals with less than a high school education are less likely to have had their blood pressure checked than people with more than a high school education?

MR. MIKHAIL: Talking blood pressure or cholesterol?

MR. BIERSTEKER: Cholesterol. Excuse me. I misspoke. Let me do it over again.

Q. (By Mr. Biersteker) That individuals with less than a high school education are less likely to have had their cholesterol checked than individuals in other educational groups?

A. Actually, high school graduates is a little bit greater than less than ninth grade education.

Q. Yes, you're right, but high school -- your correct. You are correct. The group, however, that has -- that is most likely not to have had their cholesterol checked were individuals who have only some high school, correct?

A. Correct.

Q. The never married in the marital status box are much more likely to have their cholesterol checked than any other marital group?

A. That's correct.

Q. Your Exhibit 2, description of your opinions, says that you are going to have opinions about the prevalence of smoking and the demographics of smokers among adults in Mississippi.

A. Uh-huh.

Q. What are your opinions about that subject?

A. Basically take it from the Behavioral Risk Factor Surveillance System, just what that shows.

Q. Would you summarize, or you think the high points of your opinions are about smoking prevalence in demographics in adults in

Mississippi?

A. The overall smoking prevalence is about 24 percent. It's a little over 20 percent in women and a little more than 27 percent in men. The age group that smokes the most is, as you said earlier, the age groups between the youngest and the oldest, those in the middle.

Q. And how are you using -- what's the break-out exactly for the groups?

A. For age groups?

Q. Yes.

A. The highest age group is 45 through 54 year olds, and the second highest age group, it's almost exactly the same; it's 25 through 34. This is 1995 data.

Q. Are you going to give any other opinions about smoking prevalence in the demographics of smoking among adults in Mississippi?

A. Well, basically I can talk about anything that's in the BRFSS data.

Q. Is BRFSS the only data on which you are relying for your opinions?

A. It's the only data that I currently have. I think there's probably Mississippi-specific data from the Cancer

Prevention Study, too, done by the American Cancer Society, but I'm not sure.

Q. Is that one of those data sources you might look at?

A. Well, some of that data's actually in the Surgeon General's Report from 1989, but it's not state-specific, and I don't know if we actually have state-specific data.

Q. I apologize if I've asked this before, but for what years do BRFSS data exist?

A. I have it here for '91 through '95. Something was done in 1990, but I don't think it was exactly the same surveillance system.

Q. Do you have any information about smoking prevalence or the demographics of adult smokers in Mississippi for any years other than 1991 through 1995 inclusive?

A. I don't currently, no.

Q. I take it you have no opinions, then, for years other than 1991 through 1995?

A. That's correct.

Q. From 1991 through 1995, has smoking prevalence changed in Mississippi?

A. If you look, it's -- it has not changed very much, no.

Q. You were referring to an exhibit, I believe?

A. Yes --

Q. Is this Exhibit 4?

A. Yes.

Q. Was there any particular page of that exhibit to which you were referring?

A. The first four pages are smoking prevalence over time. They're pretty much -- they jump around a little bit, but it pretty much stays the same.

Q. Is it your understanding that the BRFSS survey covered only individuals 18 years of age and older?

A. Yes.

Q. The next portion of your opinions that I wanted to ask you about refers to your opinions concerning smoking prevalence and the demographics of smoking among the state's children and adolescence. If you would, please define for me what you mean by children.

A. The only data that I have regarding smoking in people less than 18 is from the Youth Risk Behavior Survey that includes ninth through twelfth graders.

Q. All right. So do you have an opinion about smoking prevalence among children in eighth grade or below?

A. Not currently, although one of the questions that is asked of the people who are in the youth behavior -- Youth Risk Behavior Survey is when they smoked their first cigarette or at what age, but that doesn't give you prevalence in that age group.

Q. For what years do the Youth Risk Behavior Survey data exist? Have I asked you this before? We were confused about whether it was '93 or '95. There was some confusion about whether it was '93 or '95.

A. The one I have in front of me is 1995. I think there were two others done prior to that, at two-year intervals.

Q. So you think one would have been done in 1991?

A. I think there's a 1991.

Q. Have you looked at the survey from those years?

A. No. Let me rephrase that. Not for the purpose of the deposition anytime in the recent past.

Q. You may have looked at it. You just can't remember what the data showed?

A. Right.

Q. It says that your opinion is that the vast -- quote, "Vast majority of Mississippi's adult smokers started or start smoking as children or adolescents," close quote. What do you mean by started or start?

A. There is Behavior Risk Factor Surveillance System information from 1992 that looks at the age at which smokers started smoking regularly.

Q. Is this one of the documents that you produced?

A. Yes.

Q. Help me find it.

A. Sure. It should have -- the beginning of it should have 1992 up in the right-hand corner, and it should be the last pages of that group.

Q. Is there any particular table to which you refer?

A. I'm sorry. It's --

MR. BIERSTEKER: Why don't we mark it as an exhibit, first, otherwise we will get --

MR. MIKHAIL: Is it not already marked as an exhibit?

MR. BIERSTEKER: No, it's not.

[EXHIBIT NO. 8 WAS MARKED AND MADE A PART OF THE RECORD.]

THE WITNESS: It's pages 182 and 183, the page numbers up in the right-hand corner.

Q. (By Mr. Biersteker) Unfortunately, I don't have them.

MR. MIKHAIL: She can tell you what table number. You can write it on that if you want.

THE WITNESS: It's Table 52. Both pages are Table 52.

Q. (By Mr. Biersteker) All right. Those are the last two pages in Exhibit 8?

A. Correct.

Q. What were the page numbers? I will write them on mine.

A. Well, they may be backwards.

Q. Never mind then.

A. They were backwards in mine.

Q. Could you explain to me how the data in these two tables are organized?

A. Okay. The denominator is people who

have smoked 100 or more cigarettes in their life.

Q. Yes.

A. And the enumerator is people who started smoking regularly in each one of these age groups that are listed across the top. And if you look across the bottom, you have the totals, so a way to interpret this would be 72.2 percent of the people who have smoked 100 cigarettes or more in their life in this survey started smoking regularly between the ages of 10 and 20.

Q. Do you know what percentage of people who have smoked 100 cigarettes or more in their lifetime started smoking under the age of 18 -- started smoking regularly? Excuse me. Let me ask the question again because it's not going to be clear.

Do you know what percentage of people who have smoked 100 cigarettes or more in their lifetime started smoking regularly under the age of 18?

A. No.

Q. You are including, then, in adolescents individuals aged 18 to 20?

A. This is as close as I can get to that statement, correct.

Q. I'm not sure I know what you mean by that.

A. For the purpose of that statement in that -- that you were referring to.

Q. In your Expert Disclosure Statement, Exhibit 2?

A. Right. This is as close as I can get to addressing that statement currently, yes.

Q. You say currently. Is this one of the things you plan to do that you haven't done?

A. If I need to. I don't know, in fact, that it can be done, but I think there are ages attached to the BRFSS data.

Q. If fewer than 50 percent of adults who smoked more than 100 cigarettes in their lifetime began smoking under the age of 18, would you modify your opinion?

A. I might change the way it was worded.

Q. How would you change it?

A. To actually state the ages and the percentages.

Q. In fact, it wouldn't even be a majority, would it?

A. If it was less than 50 percent.

Q. What percentage of individuals under the

age of 18 in Mississippi smoke?

A. I can't tell you that precisely.

Q. You mentioned earlier that you had some information from the 1995 Youth Risk Behavior Survey.

MR. BIERSTEKER: Off the record.

[COMMENTS OFF THE RECORD.]

Q. (By Mr. Biersteker) Anyway, you said earlier there was some data from YRBS concerning smoking by individuals in ninth to twelfth grade; is that right?

A. Yes.

Q. Why don't we pull out, if you could, so we can identify for the record the document that discusses that.

MR. MIKHAIL: Look over here. See that.

MR. BIERSTEKER: I see it is very plainly marked. Nine, please.

[EXHIBIT NO. 9 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, we've marked as Exhibit 9 the document that summarizes the YRBS data for 1995.

A. That has to do with tobacco, yes.

Q. There was only a portion of the questions --

A. Correct.

Q. -- that were asked in that survey that are summarized in this exhibit; is that right?

A. Yes.

Q. And what specific pages?

A. I was looking at question 28, which is on page 32, because they're out of order.

Q. I don't know that I have a page 28.

A. It's question 28, page 32.

Q. I apologize. I just wasn't listening carefully. And question 28 is the percentage of respondents who smoked cigarettes on one or more of the past 30 days; is that right?

A. Right.

Q. That's a very different question, isn't it, than the question asked in BRFSS?

A. Yes.

Q. You wouldn't expect those percentages to be -- strike that. You wouldn't expect the answers to those questions to be the same?

A. No.

Q. Did they ask the participants in the YRBS whether they had smoked 100 or more

cigarettes in their lifetime?

A. I don't know. They did ask the percentage of those who had actually smoked. They did ask of those who had actually smoked, how many had smoked two or more cigarettes per day during the past 30 days, which is question 29. I don't think there's a 100-or-more question.

Q. Well, actually --

A. Here's the list of questions.

Q. Ah, better.

A. It's page 30, which is actually behind page 31.

Q. Actually, question 29 is a little bit different the way it's phrased on page 32, question, at least if I look at page 30, said, "During the past 30 days, on the days you smoked, how many cigarettes do you smoke per day?" Whereas, the question under data heading is the percentage of respondents who smoked two or more cigarettes per day during the past 30 days, which I -- which is accurate? Do you know?

A. I don't know.

Q. If the list of questions in the back is the correct phrasing of the question --

A. My guess is that they took all the

people from question 28 -- this is, you understand it, just an assumption, I guess, although question -- the people in question 28 who smoked all 30 days.

Q. If you don't know, that's fine.

A. I don't know.

Q. All right. You would expect the percentage of individuals under the age of 18 that have smoked 100 or more cigarettes a day (sic) to be less than the percentage who answered yes to that question in the 18- to 24-year-old group in BRFSS, wouldn't it?

A. I'm sorry. Could you repeat that?

Q. BRFSS gives you data on the percentage of people who said that they smoked more than 100 cigarettes in their lifetime, right?

A. Right.

Q. And it does that for the age group 18 to 24 specifically, among others?

A. Okay.

Q. And it's included in your Exhibit 4, percentages for that age group. If that same question, "How many of you have smoked 100 or more cigarettes in your lifetime?" were asked under the age of 18, would you expect the percentage to be

lower than the percentage reported by BRFSS in the 18- to 24-year-old group, wouldn't you?

MR. MIKHAIL: I object to the form. You can try and answer it.

THE WITNESS: I don't know.

Q. (By Mr. Biersteker) You have no expectation one way or the other? In order for it to be higher in the 18 to 24 year old, that means nobody must have started between 18 and 24. It couldn't be higher in order for it to be the same. Nobody would have --

A. Sure, but if it's gone --

Q. Let me break it up. We're getting too conversational. The percentage of people who have smoked 100 or more cigarettes in their lifetime in the under-age-18 group cannot be higher than the percentage of people who smoked 100 or more cigarettes in their lifetime in the 18-to-24-year-old group, can it?

A. Sure. It's a totally different group, and the percentage may be different when they get to 18 to 24.

Q. That unlikely. I've looked at the data from '91 to '95, and there wasn't much change in smoking prevalence, right?

A. True.

Q. At any rate, you have no expectation one way or the other about whether those numbers would be the same or higher or lower?

A. I would prefer to look at them instead of guessing.

Q. No, I'm not -- I just wondered based upon your experience, training, and education whether you had a prediction, recognizing that it isn't hard data about whether the percentage would be higher or lower?

A. It would probably be --

Q. In the under 18-year-old group?

A. It would probably be lower than the 18- to 24-year-old group.

Q. The teenage years are a time of rebellion and risk-taking, aren't they?

A. Yes.

Q. I want to ask you a few questions about other risky behaviors that individual participants of the YRBS survey were asked about. Since you didn't bring those, I brought a report. It's not -- it may not have everything in it that you have, but it's what the State of Mississippi produced to me. So let me mark that as an exhibit

and hand it to you.

[EXHIBIT NO. 10 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. I hand you what's been marked as Exhibit 10, and I wanted to ask you only about a few pages on the document. You may review it quickly, if you like.

MR. MIKHAIL: Which pages do you want her to review?

MR. BIERSTEKER: I was going to start off by asking about page 38, which talks about alcohol.

MR. MIKHAIL: Is there a specific portion of that page you want to review before you ask her a question, or the whole page?

MR. BIERSTEKER: Actually, the response summary portion at the bottom is just where I'm going to ask her.

THE WITNESS: Okay.

Q. (By Mr. Biersteker) Doctor, as I review this, it appears as if more than three-quarters of Mississippi high school students have had a drink in their lifetime; is that right?

A. Yes.

Q. And that nearly half had a drink in the

last month?

A. Of the students that were surveyed.

Q. Again, this survey is supposed to be representative of the Mississippi high school population, isn't it?

A. Right.

Q. If it met that objective, then it would be fair to generalize it to the population?

A. Right.

Q. If the data are not representative of the Mississippi high school population, it would be inappropriate, wouldn't it, to extrapolate these data to that population?

A. Yes.

MR. MIKHAIL: That sounds very noble of you as a proponent of anecdotal evidence.

MR. BIERSTEKER: That's because it's all you'll let us have, Charles.

Q. (By Mr. Biersteker) And about 30 percent of the high school students in Mississippi had five or more drinks in a row in the last month?

A. Yes.

Q. Let's turn to page 55 of this document, Exhibit 10, and I want to discuss sexual activity. The data showed that 67 percent or more

of Mississippi high school students had sexual intercourse sometime in their lifetime.

A. Yes.

Q. Isn't that an astounding figure?

MR. MIKHAIL: Object to the form of the question. Go ahead and answer.

THE WITNESS: I don't know how it compares to the rest of the Country.

Q. (By Mr. Biersteker) Do you think it represents a failure of public health in Mississippi, when that percentage is as high as it is?

A. I think we would all prefer it was lower.

Q. Is that a yes?

MR. MIKHAIL: She answered your question.

MR. BIERSTEKER: I'm asking for clarification of the answer, counsel, if that's okay.

THE WITNESS: I think that efforts that have been made in the past have not been as effective as we would like them to have been.

Q. (By Mr. Biersteker) I see that, according to this data anyway, about half of the

respondents have been sexually active in the course of the last month. Do you read the data the same way? Excuse me. Three months.

A. Yes.

Q. And over a quarter of the respondents became -- had sexual intercourse before the age of 13; is that right?

A. A quarter of those were sexually active.

Q. And of those who were sexually active, over 42 percent didn't use a condom, and over 35 percent didn't use any form of birth control?

A. Correct.

Q. Now, for the most part, high school students in 1995 in Mississippi know about the risk of getting HIV or AIDS from unprotected sex, don't they?

A. I hope so, but I don't know that.

Q. Doesn't this document, if you turn to page 96, question 54, which is the second from the bottom, Doctor, don't the data indicate that 84.1 percent of Mississippi high school students have been taught about AIDS/HIV infection in school?

A. Yes.

Q. If that figure is correct, why, then, do so many of the students who are sexually active

not use a condom?

MR. MIKHAIL: Object to the form, but you can try to answer.

THE WITNESS: Because behavior's not always changed by knowledge of risk.

Q. (By Mr. Biersteker) Sometimes people will do what they want to do, even if they know better?

A. Sure.

Q. Pregnancy is also a risk of unprotected sex, isn't it?

A. Yes.

Q. And most high school students in Mississippi in 1995 know that?

A. I would assume so.

Q. Mississippi, at least in 1993, the last year for which I was able to locate data, had the highest teenage pregnancy rate in the Country, didn't they?

A. I'm not sure where we ranked, but it would be either the highest or somewhere close to that, yes.

Q. Are you familiar with the Book of the States, Doctor?

A. Pardon?

Q. Have you ever heard of a document called the Book of the States?

MR. MIKHAIL: Could you show it to her?

MR. BIERSTEKER: Well, I will in a minute. I'm looking for it. I'm just asking if she's familiar with it. If she's not, I'll show it to her and see if she's familiar with it then.

THE WITNESS: I don't know. Not that I recall.

MR. BIERSTEKER: Okay.

MR. MIKHAIL: What you didn't see is the bewildered look on her face while you were digging through the box.

MR. BIERSTEKER: It's a Book of the States that's put out by the Government. Off the record.

[OFF THE RECORD.]

Q. (By Mr. Biersteker) Actually, it's not by the Government. How about Health Care State Rankings, 1996? Is that something you've heard of before?

A. I don't know. I haven't looked at it.

Q. Teenagers who are pregnant are more likely to have a low-birth-weight baby than more

mature women who are pregnant; is that right?

A. I believe so.

Q. Venereal disease is also a risk of unprotected sex, right?

A. Yes.

Q. And, in fact, you referred earlier to STD's. That refers to sexually transmitted diseases?

A. Correct.

Q. Doesn't Mississippi have the highest rate of syphilis in the Country?

A. Yes.

Q. Syphilis can cause death, can't it?

A. If it's untreated for a long time, yes.

Q. And, in fact, Mississippi ranks quite high in terms of deaths due to syphilis, compared to the other states, doesn't it?

A. I don't know.

Q. Let's turn to page 43 of Exhibit 10. This page summarizes data for 1995 among Mississippi high school students on alcohol and drug use. Actually, drug use, I believe. Right?

A. I think so, yes.

Q. Okay. It indicates that almost 32 percent of Mississippi high school students have

smoked marijuana?

A. Yes.

Q. And about three percent or less have used cocaine?

A. Yes.

Q. And slightly over two percent have used steroids without a prescription?

A. Yes.

Q. And about one-and-a-half percent, a little less, have injected illegal drugs?

A. Yes.

Q. And 7.7 percent have used illegal drugs such as LSD and PCP and heroin?

A. Yes.

Q. According to the data represented on page 66 of Exhibit 10, Doctor, Mississippi's high school students have a terrible diet, don't they?

A. It doesn't look wonderful.

Q. Well, if you won't agree with my characterization, let's review some of it. 48.2 percent did not eat fruits the previous day?

A. Right.

Q. 82.4 percent had no green salad the previous day?

A. Right.

Q. Over half had no cooked vegetables?

A. Right.

Q. On the other hand, about three-quarters had French fries or potato chips the previous day?

A. Right.

Q. More than half had hamburgers, hot dogs, or sausage, right?

A. Right.

Q. And more than half had cookies, doughnuts, pie, or cake?

A. Right.

MR. BIERSTEKER: Charles is over there saying, What's wrong with that?

MR. MIKHAIL: I was going to say, I would think the percentages are higher.

Q. (By Mr. Biersteker) Is it true this document reflects lifetime dietary patterns are established during youth?

A. I'm sorry. Could you repeat that?

Q. Is it true, as this document states just before it enumerates the questions on page 66, that lifetime dietary patterns are established during youth?

A. That's what this says.

Q. Do you agree?

A. It sounds reasonable to me.

Q. Do you have any reason to disagree?

A. No.

Q. Are other patterns of behavior also established during youth?

A. I'm sure they are.

Q. Having a poor diet is a risk factor for chronic disease, isn't it?

A. Yes.

Q. It's a risk factor for coronary heart disease, isn't it?

A. Yes.

Q. Cancer?

A. Yes.

Q. Risk factor for stroke?

A. Yes.

Q. Is it a risk factor for diabetes?

A. Yes.

Q. Is it a risk factor for arteriolosclerosis?

A. Yes.

Q. Is arteriosclerosis different than atherosclerosis?

A. No.

Q. Last question or a set of questions on

Exhibit 10, and I'm going to ask you a little bit about physical activity, which I believe is found on pages 72 and 73 of the exhibit. Before I ask you about specific things, is regular physical exercise important to good health?

A. Yes.

Q. Are there estimates of the number of deaths attribute building to having sedentary lifestyle -- strike that. Are there estimates of the number of deaths in the United States attributable to a sedentary lifestyle?

A. I'm sure they are, but I don't know what they are.

Q. Could you identify any for me?

A. Not off the top of my head.

Q. How do epidemiologists typically define sedentary lifestyle? And if you want, you may look at the document. There's a definition here. I just wanted to know if that's the accepted definition.

MR. MIKHAIL: Are you still on page 72?

MR. BIERSTEKER: It's on one of those two pages. I believe it was, yes. It's the top of page 73.

MR. MIKHAIL: 73?

MR. BIERSTEKER: 73. I'm sorry. Did I say 71 or 72?

MR. MIKHAIL: 72.

MR. BIERSTEKER: I misspoke.

MR. MIKHAIL: I don't see anything on page 73.

THE WITNESS: I'm not sure. That sounds like what I've heard before, but I'm not sure it's exactly the same as what I've heard before.

Q. (By Mr. Biersteker) Let me ask the question as: If you exercise for three times a week, 20 minutes at a time, it was exercising. If it was less than that, you were sedentary. Does that comport with your memory?

A. I think that's correct, yeah.

Q. By that measure, not quite half of 48-plus percent of Mississippi high school students are sedentary, aren't they?

A. Right.

Q. And 51.2 percent of those folks, or a little more than a quarter of the total, I guess, don't exercise at all, right?

A. Right.

Q. All right. Let me put Exhibit 10

aside.

[SHORT BREAK.]

MR. BIERSTEKER: All right. Back on the record.

Q. (By Mr. Biersteker) I just wanted to ask you one other thing about smoking prevalence, and then we can leave that question. In addition to the specific statements here, there's a sentence at the very top of the page where it indicates that you're going to talk about the nature and extent of tobacco use in Mississippi. Do you see that phrase?

A. Uh-huh.

Q. Have we already discussed your opinions on this subject?

A. I believe so.

Q. I mean if there's anything more, I'd like to know about it; but if there isn't, that's fine. Are there any additional opinions you have on smoking prevalence?

A. Not that I can think of.

Q. Earlier we talked about the communications you have with David Burns and Tom Nevotni and others. Can you tell me everything you know about the statistical model you used to

estimate health care costs attributable to smoking in the Mississippi Medicaid, State employee, or charity hospital population?

A. I know that it's a statistical model and includes smoking prevalence data and different illnesses associated with smoking and the demographics of the population, but that's all I know.

Q. Okay. The next opinion I wanted to ask you about is the specific opinion in the middle of the first paragraph of Exhibit 2 where the document says that you are expected to testify that, quote, "Cigarette smoking is the leading cause of preventable death in Mississippi," close quote. Do you have estimates of deaths attributable to cigarette smoking in the state?

A. I have just rough estimates of some of the larger categories. It doesn't include -- there are a lot of things this doesn't include. If you'll look on the -- do you have --

MR. BIERSTEKER: Well, let's mark it for the record. Otherwise, we'll -- I'll get back to my office and somebody will say, You did what?

[EXHIBIT NO. 11 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, for the record, is Exhibit 11 the rough calculations to which you refer?

A. Yes. And it's not at all inclusive of everything that relates back to smoking. I just wanted a rough idea of looking at some of the major categories.

Q. Well, why don't you explain to me what Exhibit 11 represents, please.

A. Okay. If you look at the first column, those are population attributable risks from the 1989 Surgeon General's Report that originated from the Cancer Prevention Study to -- for each one of those diseases.

Q. Is it the Relative Risk or the population attributable risk?

A. It's the population attributable risk.

Q. So --

A. And the first column is for males. I'm sorry.

Q. So in order to make sure I understand that, the first column for males is -- that number is calculated based upon smoking prevalence in the Nation as a whole?

A. Yes. So this is very rough.

Q. All right. I understand now the first column. Actually, there's a column before that that lists --

A. I'm sorry,, that lists the diseases.

Q. Right. CHD is coronary heart disease; is that right?

A. Yes.

Q. COPD is what?

A. Chronic obstructive pulmonary disease.

Q. If you could just go down the column, tell me what each of those stand for, I'd appreciate it.

A. The next one is cancer of the lip, oral cavity, and pharynx. The next is cancer of the larynx, then cancer of the esophagus, then lung cancer, pancreatic cancer, cerebrovascular disease in less than 65 year olds, and cerebrovascular disease in those greater than 65 years of age.

Q. All right. Thank you. Then I guess -- what would be the third column? What are those numbers?

A. Number of deaths in Mississippi according to the vital statistics in each one of those categories I just listed in 1995.

Q. And then I take it that the last three

columns are the same thing except for women?

A. Correct.

Q. They correspond to the same --

A. Yes.

Q. -- as for the males, right? You said this was very rough.

A. Yes.

Q. In what respects is it rough?

A. It would be better to use Mississippi-specific smoking prevalence. However, the prevalences we have are from current data as opposed to data years ago, which would affect outcomes of today.

Q. Why don't you elaborate on that.

A. People who smoked -- and in addition -- no, it doesn't -- okay. The population attributable risks are related to current smoking prevalence and then also looks at former smokers and their risks. But a person who has a stroke today is one of the people who smoked X number of years ago up to the present, and there are a lot more people who smoked -- smoking has gone down across the Country. All we have from BRFSS data is current smoking. We don't have data on smoking prevalence, or I don't, from years ago, and it

would be nice to have that to put into this.

Q. BRFSS doesn't ask about former smoking?

A. About 20 percent of the people in the Mississippi population, according to BRFSS, are former smokers, yes.

Q. So it does ask about it. All right. So the estimate is rough because it does not include Mississippi smoking prevalence numbers?

A. It's National.

Q. It's National?

A. Right.

Q. And the estimate is rough because it is based on 1989 smoking prevalence and 1989 disease data -- actually, maybe not -- well, you tell me. I'm not explaining it well, and that's because I don't understand it well. You were talking about current smoking versus former smoking, and I'm not sure how that makes these estimates run, so could you elaborate, please?

A. Well, I'm not explaining it well, and it may be because I'm not absolutely clear on it. They actually do include former smoking as a part of the population attributable risk, but it is National smoking data as opposed to Mississippi smoking data.

Q. What I got?

A. Right.

Q. Is that -- is the fact that the data in Exhibit 11 relies upon National smoking prevalence data as opposed to Mississippi-specific data the only respect in which these calculations are rough?

A. They are also rough because it's not an inclusive list of diseases related back to smoking.

Q. What additional diseases would you put on this list?

A. Well, I can't be sure, without looking into it further; but environmental tobacco smoke and the illnesses that relate to that and smoking in pregnancy, things like that, were not on this list.

Q. Would you include any diseases not identified in the 1989 Surgeon General's Report which you brought a copy of today -- which you brought a copy of?

MR. MIKHAIL: Can you show her a particular part?

MR. BIERSTEKER: I think there's a chart of the 1989 Surgeon General's Report, and it

may be the page that you flagged, Doctor.

MR. MIKHAIL: I'd like her to look at it.

MR. BIERSTEKER: That lists diseases that the Surgeon General thought were related to smoking.

MR. MIKHAIL: Is that what you tabbed?

THE WITNESS: No. This was -- the chart that I was looking at for attributable risks is Table 11 on page 156.

Q. (By Mr. Biersteker) Table 11, page 156, of the 1989 Surgeon General's Report?

A. Yes.

Q. All right. So you would add to this list diseases associated with environmental tobacco smoke?

A. Yes.

Q. Do you know what those diseases are?

A. I -- I couldn't discuss it off the top of my head. I haven't reviewed that.

Q. What would you review in order to determine what those diseases are?

A. I believe there's another Surgeon General's Report on environmental tobacco smoke. Is there not?

MR. BIERSTEKER: Off the record.

[COMMENTS OFF THE RECORD.]

Q. (By Mr. Biersteker) All right. Are you able to tell me any of the diseases that have been associated with environmental tobacco smoke?

A. Lung cancer.

Q. Okay. Any others?

A. No.

Q. You mentioned smoking and pregnancy. What conditions have been associated with smoking in pregnancy?

A. Small-for-gestational-age babies, not gain enough weight.

Q. Anything else?

A. Well, after the baby's born, SIDS deaths, and, as I understand it, there are more respiratory infections in children of people who smoke.

Q. The latter two might actually go under the environmental tobacco smoke category?

A. Sorry.

Q. Don't apologize. Are there any other diseases that, as you sit here today, you would add to this list?

A. I'm sure there are. I just can't think

of them.

Q. If that they were important, would you remember them?

A. At this point, I don't know.

MR. MIKHAIL: How much longer do you have?

MR. BIERSTEKER: I could go on on this topic, and I probably will.

MR. MIKHAIL: Want to break then?

MR. BIERSTEKER: Anytime is fine with me.

MR. MIKHAIL: Let's do that.

[COMMENTS THE RECORD.]

[NOON RECESS.]

Q. (By Mr. Biersteker) Doctor, one thing I want to ask you just a housekeeping matter before we get too far down the pipe and I forget. Exhibit 7, as I was looking at it over the lunch hour, appears to be an excerpt from document -- Exhibit 6. Excuse me. The one dealing with the person-to-person survey.

A. Okay.

Q. And I don't know --

MR. BIERSTEKER: Maybe, Charles, you know, but I don't know that that's been produced

to us in discovery and if -- I would ask, just because it might be more information that relates to how the survey was conducted, et cetera, if we could have a complete copy of Exhibit 6.

MR. MIKHAIL: Is that, in fact, a portion of the document?

THE WITNESS: I don't know. It was just given to me by Ellen. I don't know.

MR. BIERSTEKER: It starts on page seven. The first page is numbered seven, and it stops in mid-sentence on the last page.

MR. MIKHAIL: We can check, Peter. I feel certain that if Ellen is using it that it would have been something that was produced. But if you want, we can certainly check on that.

MR. BIERSTEKER: I'd appreciate it. Thank you. Off the record.

[COMMENTS OFF THE RECORD.]

Q. (By Mr. Biersteker) Back to Exhibit 11. You may have answered this, Doctor, and if you have, I apologize. But this -- is there any way, other than the failure to use Mississippi current smoking prevalence data and the omission of certain diseases in which Exhibit 11 is still rough?

A. Sure. I think you could -- you could do it by age groups and you could do it by race and it would be more exact.

Q. That was actually one of my questions. When -- did you just apply this population attributable fraction to the total deaths without doing it for each age/sex category?

A. Yes.

Q. Is there any other respect in which Exhibit 11 is rough?

A. I'm sure someone who is an epidemiology professor could think of other things, but I can't think of any.

Q. In calculating relative risk ratios that go into the population attributable risks we discussed earlier, is any attempt made to control for potential confounders?

A. I don't know. Those relative risks, like I said, that were used in this came out of the '89 Surgeon General's Report, and I'm not sure.

Q. You're not sure whether any attempt was made to control the confounder?

A. Right.

Q. If confounding exists and is not

controlled for, then these calculations would attribute to smoking deaths that were not, in fact, caused by smoking, wouldn't they?

A. Yes.

Q. Are there differences between smokers and nonsmokers other than their smoking?

A. Probably.

Q. I think we talked about some earlier; for example, smokers tend to be less well-educated than nonsmokers, right?

A. Uh-huh.

Q. Smokers are more likely to be single than nonsmokers, is that right, or don't you know?

A. Never-married people are more likely to smoke.

Q. Yeah. Actually, the never married are least likely to smoke. Right? The BRFSS --

A. Oh, right, least likely. You're correct. I'm sorry.

Q. On the other hand, the individuals who are separated or divorced or cohabitating with somebody are more likely to smoke, right?

A. Yes.

Q. Smokers tend to be more sedentary than nonsmokers, don't they?

A. That would be my guess.

Q. Have you ever seen data on that that you can remember?

A. No.

Q. Do you remember seeing something to that effect in the '89 Surgeon General's Report?

A. I don't remember.

Q. Do you know if smokers are more likely to consume a high-fat diet compared to nonsmokers?

A. I don't know.

Q. Do you know whether smokers are more likely to have a low-fiber diet compared to nonsmokers?

A. I don't know.

Q. Do you know if smokers are more or less likely than nonsmokers to use their seat belts?

A. I can guess, but I don't know.

Q. What would be your surmise?

A. Can I guess?

MR. MIKHAIL: You can guess.

THE WITNESS: My guess would be that they would be less likely to use seat belts, but I don't know that.

Q. (By Mr. Biersteker) Do you think smokers are more or less likely to have vitamin

deficiencies?

A. I don't know.

Q. Do you know if smokers are more or less likely to be either 20 percent over or under weight?

A. I don't know.

Q. Do you know if smokers are more or less likely than nonsmokers to eat breakfast regularly?

A. I don't know.

Q. Do you know if smokers or nonsmokers are more or less likely to have social support mechanisms? Do you understand my question?

A. Yes.

Q. You do?

A. I don't know.

Q. Do you know of any mortality risk factor that is more common in nonsmokers than it is in smokers?

A. I'm sorry. I don't know.

Q. The relative risk numbers used to compute the population attributable fractions in Exhibit 11, I believe you said, came from the Surgeon General's Report?

A. Right.

Q. And those, in turn, were derived from

the Cancer Prevention Survey, too?

A. Yes.

Q. Can relative risks vary from one population to another?

A. Yes.

Q. Is it fair to say that the healthier the nonsmoking population that's studied, the higher the relative risk for smoking will be?

A. I'm sorry. Can you repeat that?

Q. Sure. Is it true that the healthier population of nonsmokers is, the higher the calculated relative risk of smoking will be?

A. If the smoking population is the same in both examples, if you have a very healthy nonsmoking population and an unhealthy nonsmoking population, and your enumerator, the smoking population, the risk -- the smoking population stays the same across those, then the relative risk would be greater in the one with the denominator, the nonsmoking population that is very healthy.

MR. BIERSTEKER: I'm going to ask you to read that back, please.

[PREVIOUS QUESTION READ BACK.]

Q. (By Mr. Biersteker) Let me ask, Doctor,

could you please clarify your answer to the prior question?

A. I'll try. You could say the relative risk is the incidence of disease in an exposed compared to an unexposed population. If your unexposed population, or the nonsmoking population, is otherwise very, very healthy, your relative risk is going to be higher if your smoking population is different in other ways from your nonsmoking population, has more risk.

Q. Let's maybe walk through an example and see --

A. Okay.

Q. -- see if that helps crystalize it. Let's assume we've got a population of nonsmokers with a death rate of .01 and a death rate in a population of smokers of .02. The relative risk of smoking in that population would be two, right?

A. Correct.

Q. Now let's say that everybody starts exercising, both the smokers and the nonsmokers, and that it results in an equal reduction in the death rate in both populations. So let's say that the nonsmoking death rate falls to .005 and the smoker death rate falls to .015, same absolute

reduction of death rate of both populations, right?

A. Uh-huh.

Q. The relative risk in the hypothetical new population, when everybody starts exercising, is now three; isn't that right?

A. Uh-huh. I mean yes. Sorry.

Q. So now let me ask a question building off that example which is, I think, slightly different than the one I asked before. Is it true that the healthier the population, the higher the relative risk of smoking will be, assuming that the absolute difference in the death rate between smokers and nonsmokers remains the same?

A. Not necessarily.

Q. Why not?

A. Well, your example here, you've decreased it by substraction -- you've decreased the incidence by subtraction as opposed to by proportion.

Q. What I did was I assumed the absolute difference --

A. Was .05.

Q. -- was the same. That was in my question.

A. I'm sorry.

MR. BIERSTEKER: Could we repeat the question?

[PREVIOUS QUESTION READ BACK.]

THE WITNESS: If the difference in death rates goes down an absolute amount as opposed to a proportionate amount, then the relative risk will be greater and the healthier the population, in this example.

Q. (By Mr. Biersteker) Well, isn't it just mathematically true as a general proposition?

A. Yes, sure.

Q. Do you know one way or the other whether the changes in death rate for different risk factors would result in proportionate or numerically equal reductions in the smoking and nonsmoking populations?

A. My guess would be proportionate, but I don't know that for a fact.

Q. Is it an educated guess? Is it based on anything, or is it just something you think is probably right?

A. It's a guess.

Q. Okay. Does -- do you know the name of the software that generates smoking -- estimates

of smoking attributable death?

A. SAMMEC.

Q. Correct, S-A-M-M-E-C. Does SAMMEC also calculate medical care costs attributable to smoking?

A. I believe it calculates the costs related to the deaths but not the morbidity. I'm not sure of that.

Q. Do you know what SAMMEC stands for?

A. Smoking Attributable -- that's the end of it.

Q. Okay. Thanks. Doctor, if everybody in Mississippi quit smoking in 1965, would total medical care costs in the state today be higher or lower?

A. I don't know.

Q. Have you made any estimates of deaths in Mississippi attributable to anything other than smoking?

A. No.

Q. Have you seen estimates of deaths in Mississippi attributable to any other lifestyle choice?

A. Not that I can recall offhand.

Q. If you haven't made those calculations,

then you must not have compared the estimates of deaths attributable to smoking as reflected in Exhibit 11 to estimates of deaths caused by any other risk factor, right?

A. That's correct.

Q. If you haven't made that comparison, is it fair to say that you have no empirical basis for the statement in your Expert Disclosure Statement, Exhibit 2, that cigarette smoking is the leading cause of preventable death in Mississippi?

A. That is currently true, yes.

Q. Is that something that you intend to investigate further before trial?

A. Yes.

Q. How are you going to do that?

A. I don't know.

Q. How are you going to find out?

A. I'm not sure.

Q. Exhibit 2, again, Doctor, advises in the first paragraph that you will discuss, quote, the identity -- wait a minute. Let me back up.

MR. MIKHAIL: Do you have that statement in front of you, Dr. Currier?

THE WITNESS: Yes.

Q. (By Mr. Biersteker) The last clause of the first paragraph said that you're going to, quote, "describe the usual methods and data sources used by state epidemiologists in characterizing disease within a state, and how surveys in epidemiologic studies are used." I guess my first question in this area is: What do you mean by characterizing disease within a state?

A. Looking at the prevalence and incidence, describing where it occurs.

Q. Is this morbidity data as opposed to mortality?

A. For -- within our reportable disease system, we have morbidity data, yes.

Q. Is that what you're referring to and then describing in detail --

A. Yes.

Q. -- the demographic burden?

A. Right.

Q. Has anybody characterized smoking-related diseases in Mississippi?

A. I know that there was a Mississippi Morbidity Report that used the SAMMEC software -- and I'm not sure when it was done; it was years ago -- Anita Gunter wrote. But I believe that's

-- that's the only time I can remember.

Q. Is Anita Gunter a Mississippi State Department of Health employee?

A. Yes. She runs the Bureau of Public Health Statistics.

Q. And where did this article appear?

A. The Mississippi Morbidity Report.

Q. That article concerned morbidity?

A. It was mortality related.

Q. I'm a little confused, so let me ask this question: Has anybody attempted to estimate increased morbidity in the state of Mississippi attributable to smoking?

A. Not that I know of.

Q. Are you going to offer any opinions concerning the morbidity impact of smoking as contrasted to mortality of things?

A. The only data I have that's Mississippi-specific is mortality data. The only thing I could say about morbidity would be based on National statistics. I don't have any data on Mississippi.

Q. Are you going to discuss National morbidity statistics -- are you going to offer opinions concerning -- strike that.

Are you going to offer opinions concerning National morbidity statistics?

A. I don't know.

Q. If I asked you today, do you have any opinions concerning National morbidity statistics, what would your answer be?

MR. MIKHAIL: I object to the form of the question. Opinion, what kind of opinion?

Q. (By Mr. Biersteker) Do you have any opinions concerning National morbidity statistics?

MR. MIKHAIL: I still object to the form of the question. Opinion about the statistics for what?

MR. BIERSTEKER: Smoking. Come on, Charles.

MR. MIKHAIL: I'm talking -- you asked the question. It's on the record. You asked her if she has any opinion about National statistics.

Q. (By Mr. Biersteker) Do you have any opinion about increased morbidity attributable to smoking? Let me ask the question again.

A. Okay.

Q. Do you have any expert opinion concerning increased morbidity attributable to smoking?

A. The data that I've looked at's been mortality data. I've not looked at morbidity data.

Q. Please describe to me your opinions concerning the usual methods and data sources used by state epidemiologists in characterizing diseases within the state.

A. Any disease?

Q. I read from Exhibit 2. I just want to know what your opinions are, what that refers to. If it's something we've already discussed and there's nothing new to discuss, let me know and we can end it. But if there's another opinion out there, this doesn't really tell me what it is, and I'm trying to get to you describe it.

A. The usual things that state epidemiologists look at are Reportable Disease Systems, BRFSS data for prevalence of risk behaviors, mortality data. Different states may have different surveys and different registries they can use like Births Defects Registries and Cancer Registries. For some things, National statistics are used and applied to states because there may not be a specific state-obtained data. Some states have sentinel systems where they can

look at whether or not a particular disease is going up or down just in a few areas instead of having to collect every single case.

Q. Have you now completely described your opinions concerning the usual methods and data sources used by state epidemiologists who characterize their diseases within a state?

A. I can't say whether that's a comprehensive list of what every state epidemiologist uses, but it's what I can think of off the top of my head.

Q. I'd like to go through some of these and see. Mississippi has a Reportable Disease System, right?

A. Yes.

Q. Mississippi participated in at least some of the BRFSS surveys?

A. Yes.

Q. Did it participate in all of them?

A. I think Nationally there were other states who started them earlier than we did.

Q. Mississippi has mortality data, I guess, through the Vital Statistics?

A. Yes.

Q. Mississippi has just recently this year

started a Cancer Registry, right?

A. Right. Actually, the background and groundwork for that Cancer Registry was started longer ago than this year, but this is the first year we've started collecting data.

Q. Is there a registry for birth defects in the state?

A. No.

Q. Is there a -- as you described it, I think, sentinel data system in place?

A. We have two, one for influenza, using physicians across the state to see how many cases of flu-like illness they see on a weekly basis. That's starting about now. We'll go through March. And then we have an encephalitis -- a sentinel system for encephalitis survey that's hospital based.

Q. The next portion, again reading from Exhibit 2, is you're going to explain, quote, "how surveys and epidemiologic studies are used," close quote. How are they used?

A. Well, one thing we do with them is try and let the population know about things that we found out. For example, with our sentinel surveillance system for influenza, if we find out

that there is flu, we announce it to the press and say it started here. It's beginning. Please get your flu shots if you haven't. So it's to let the public know and to let physicians know. Another way they're used is to find out where interventions need to be applied and to find out where more resources need to be obtained possibly.

Q. I'm sorry. Where more resources need to be --

A. Obtained, for what more resources need to be retained.

Q. Is there any other way in which surveys, epidemiology studies are used by state epidemiologists that you can think of?

A. I'm sure there are. We use them -- we talked earlier about the organizations that work up studies and then make recommendations, like the CDC and ACIP and people like that. We use them sort of secondarily like that when we're making policies regarding immunizations and activity control.

Q. Since 1988, what public health interventionist has the Mississippi State Epidemiologist, your staff, conducted?

MR. MIKHAIL: Hasn't that been asked

and answered?

MR. BIERSTEKER: If it has, I'm not doing it intentionally. I'm not sure it has.

THE WITNESS: What interventions?

Q. (By Mr. Biersteker) Yeah. I think I asked about major projects before. Now I'm asking about -- yeah, public --

A. In regard to --

Q. Well, let me back up. One of the ways in which state epidemiologists use BRFSS and Reportable Disease System data and mortality data and sentinel data is to determine where interventions are needed, right?

A. Right.

Q. In Mississippi, have those data been used to determine whether interventions are needed since 1988, with your ten-year beginning?

A. Sure. We do it all the time. When we have our encephalitis system in place, if we find out about it, confirm an E-string encephalitis case, we tell the people in that area what's going on and let them know what they can do to keep from getting it themselves. And when we find out -- like I said, when we find out that flu is in the area, one intervention would be to let people know

so they can go ahead and get their flu shot, so physicians can know and start treating appropriately. We do it all the time when we -- if wouldn't be based on -- but when we find out about cases, particular diseases for which we provide immediate intervention for the contacts, that's part of our Reportable Disease System, and we apply it daily from contacts to cases of diseases that we can do something about the spread of.

Q. Are you finished?

A. Yes.

Q. I apologize if I've asked this before, but I want to ask it again in case I didn't. I don't think that I have. Since 1988, has there ever been a public health intervention related to smoking?

A. Out of Ellen Jones's office, they've been active in smoking prevention activities.

Q. Has there ever been -- do you know of any of your own knowledge, or is there something that occurs separately from you?

A. I haven't really participated in the intervention activities, if that's what you're asking.

Q. I was wondering whether you were in a position to at least enumerate them, whether you --

A. No, I'm sorry.

MR. MIKHAIL: I think she answered earlier. It was a different position that handled this sort of thing, not the State Epidemiologist.

MR. BIERSTEKER: That's fine.

MR. MIKHAIL: Is that correct, Doctor?

THE WITNESS: Yes, sir, it is.

Q. (By Mr. Biersteker) Doctor, the calculation in Exhibit 11 is one of attributable deaths. Is there another way to analyze causes of death?

A. How do you mean?

Q. Let me ask this: Have you ever heard the expression "years of potential life lost"?

A. Yes.

Q. Is that a different nature of an activity or disease on morbidity in the population?

A. Yes.

Q. Do you know what the leading cause of years of potential life lost in Mississippi is?

A. No.

Q. Do you have an expectation as to what it might be?

A. You mean when you're talking about cause of death as far as like CVD or unintentional injury or something like that as opposed to smoking?

Q. Yes.

A. I'm not sure.

Q. Would you expect it to be accidents or homicides, because they tend to affect younger people?

A. It could be unintentional injuries because, yes, they affect people who are younger.

Q. Is coronary heart disease the biggest cause of death in terms of disease within the state of Mississippi?

A. I think heart disease is, but let me look. The largest category in the Vital Records book for 1995 is diseases of the circulatory system. It includes heart disease.

Q. Do the data reflect what percentage of the deaths are due to heart disease -- excuse me, diseases of the circulatory system?

A. What percentage of all the deaths?

Q. Yes.

A. 12,042 out of 26,910.

Q. Something in excess of 25 percent?

A. Yes, almost half.

Q. Half. Let's talk for a moment about hypertension. Hypertension is associated with a stroke, right?

A. Yes.

Q. And heart disease generally?

A. I believe so.

Q. Is it also associated with kidney failure?

A. I believe so.

Q. Doesn't Mississippi have the highest prevalence of high blood pressure in the Nation?

A. I don't know.

MR. BIERSTEKER: Mark that as the next exhibit.

[EXHIBIT NO. 12 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, have you ever seen Exhibit 12 before?

A. In passing, I think I have seen it.

Q. This was a report by the Mississippi State Department of Health in 1990 on Minority Health in Mississippi; is that right?

A. Yes.

Q. The page dealing with hypertension I wanted to refer you to is on page 13 of the document, if you'll look at the Bates number at the bottom, MSDH 0049604. This report states, at least based on 1976 to 1980 data, that Mississippi had the highest high blood pressure in the Nation, right?

A. That's what it says.

Q. Do you have any reason to disagree?

A. No.

Q. Medically, hypertension can be managed in many, if not most, cases, can't it?

A. I believe so.

Q. For example, you can take medication to control your high blood pressure?

A. Yes.

Q. Of course, to be treated, somebody has to be diagnosed, right?

A. That's right.

Q. Aren't there data suggesting that a huge number of Mississippians, in excess of 600,000, either have -- have untreated high blood pressure? It's not here.

MR. MIKHAIL: If you don't know an

answer --

THE WITNESS: I don't know. I was trying to figure it out from these --

Q. (By Mr. Biersteker) The data aren't in the exhibit you've got before you. Well, I see that -- would you agree that hypertension is the most common, most potent, and most universal contributor to cardiovascular disease death in the State of Mississippi?

MR. MIKHAIL: Object to the form. Seemingly has three questions in one.

Q. (By Mr. Biersteker) You may answer.

A. I don't know.

Q. Would you agree that it is the most significant risk factor leading to heart attacks, strokes, and kidney disease in Mississippi?

A. I believe it's the most significant risk factor for strokes. I don't know about the other two.

Q. Do you see that in the report you have before you it says hypertension constitutes the most significant risk factor leading to heart attacks, strokes, and kidney disease?

A. In that case, I would know it because I read it here but not because I looked at it

myself.

Q. Do you have any reason to believe that the Mississippi Department of Health was wrong when it said that in November of 1990?

A. No. I don't know how many other things they compared that to. I don't know.

MR. BIERSTEKER: Off the record for a moment.

[OFF THE RECORD.]

MR. BIERSTEKER: Back on the record.

Q. (By Mr. Biersteker) What is the Mississippi Hypertension Control Program? Do you know?

A. In the past, there has been a program which offered medication to patients with hypertension and worked in conjunction with private physicians to control hypertension throughout the state. I don't know how much of it goes on still.

Q. This is the Mississippi Health Care Commission's State Health Plan for 1980. It's before your time, I realize, but it says and it quotes, "The Mississippi Hypertension Control Program" --

MR. MIKHAIL: Read from what page it

is.

Q. (By Mr. Biersteker) This is found -- it's on page 46 of the Mississippi State Health Plan for 1980. And it says, quote, "To quote information provided by the Mississippi Hypertension Control Program" -- now we have quotes within quotes --"'Hypertension is recognized as the most common, most potent, and most universal contributor to cardiovascular disease,'" close double quote. Do you have any reason to disagree with the excerpt there?

MR. MIKHAIL: Do you need to look at any other portion of this page or --

THE WITNESS: No, I don't know. I would have to look at a few other things.

Q. (By Mr. Biersteker) What would you want to look at?

A. The Chronic Disease Epidemiology and Control book, and I'm not sure what else.

MR. BIERSTEKER: Why don't we mark the cover page and that page as the exhibit. Is that okay?

MR. MIKHAIL: Yes, if I might see it for a minute.

MR. BIERSTEKER: Yeah, sure.

MR. MIKHAIL: I'm assuming this is our Bates stamp number.

MR. BIERSTEKER: Actually, it's not. It did have your Bates number. I don't know where it went, but that's one of mine.

MR. MIKHAIL: Okay. Do you know just for future reference, so there won't be any confusion, whether it was a document produced by the State?

MR. BIERSTEKER: It was produced by the State.

MR. MIKHAIL: This copy --

MR. BIERSTEKER: I believe --

MR. MIKHAIL: I recognize the document.

MR. BIERSTEKER: I believe it was produced by the State in the course of the litigation.

MR. MIKHAIL: I recognize it has. My only question to you was, it does not have the State Bates stamped number, and I know the State has Bates stamped everything.

MR. BIERSTEKER: It may have gotten obliterated and copied.

MR. MIKHAIL: No objection.

MR. BIERSTEKER: Mark that as the next

one in order.

[EXHIBIT NO. 13 WAS MARKED AND MADE A PART OF THE RECORD.].

[SHORT BREAK.]

[EXHIBIT NO. 14 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) I wanted to turn back just briefly -- I was thinking over the break -- to my Exhibit 11 here, the one we spent some time talking about, and I don't know that you actually need to refer to it, but if one calculated attributable deaths as you've done here for smoking and then one calculated attributable deaths due to lack of exercise and then one calculated attributable deaths due to alcohol and then one calculated attributable deaths due to accidents and then one calculated attributable deaths due to diet, you could easily have more deaths attributed to different factors than actually occurred in the state of Mississippi, right?

A. That's correct.

Q. I have marked as Exhibit 14 a large document. It is the 1995 State Health Plan. Did you have input into Exhibit 14?

A. I'm not sure.

Q. I have flagged, as you will see, a number of pages. I'm probably going to ask you about some, but not all, of those pages, but I left the flags on so that you could locate them more easily. The first question I have is -- again relates to hypertension. Doctor, is hypertension a major contributing factor as reported on the page Bates stamped 8151?

A. Is this in here?

Q. Yes.

MR. MIKHAIL: You said they were tagged. She pulled the first tag.

MR. BIERSTEKER: I'm not doing them in necessarily the order -- let me start over with the question. Locate the page MSDH --

THE WITNESS: Got it.

Q. (By Mr. Biersteker) Let me ask the question, Doctor. Doctor, the Mississippi State Health Plan for 1995 reports that hypertension is a major contributing factor in 68 percent of first heart attacks and 75 percent of first strokes. Do you see that reference?

A. Yes, uh-huh.

Q. Did you have any input into compiling

statistics for this 1995 Mississippi State Health Plan?

A. No.

Q. Do you agree with the statement that hypertension is a major contributing factor in 68 percent of first heart attacks and 75 percent of first strokes?

A. I don't have any reason to disagree.

Q. Do you have any reason to -- that's fine. Is elevated blood cholesterol a risk factor for hypertension?

A. It's a risk factor for heart disease.

Q. What are the risk factors for hypertension?

A. The risk factors for hypertension?

Q. Yes, ma'am.

A. I'm not sure exactly.

Q. Is diabetes a risk factor?

A. I believe so.

Q. How about being overweight? Is that a risk factor?

A. I believe that is as well.

Q. Who -- strike that. Let's turn to page 8186 in this document. At the bottom of the page, Doctor, there's a paragraph discussing

hypertension screening diagnosis treatment to follow-up services. Do you see that?

A. Yes.

Q. The document says that the program targets services to persons in the highest risk groups, colon, black males and females, white males between 25 and 55, people who live in rural areas, and the medically underserved who are at or near poverty. Are those the people in Mississippi who are most likely to be hypertensive?

A. I'm not sure. That's what it sounds like from here, although it may be medically underserved areas, and those at or near poverty are just at risk for not being screened and treated.

Q. Fair enough. That is a possibility. What are the risk factors for having the low-birth-weight baby?

A. As I understand it, adolescents are more likely to have low-birth-weight babies, as well as women who smoke.

Q. Anything else that you can think of?

A. I believe women with hypertension that's not controlled also have lower-birth-weight babies.

Q. Is lack of prenatal care a factor for low-birth-weight babies, too?

A. I think so.

Q. How about poor nutrition? Is that also a risk factor for having a low-birth-weight baby?

A. I'm sure it is, yeah.

Q. Is low educational and socioeconomic status also a factor of having a low-birth-weight baby?

A. I would guess so, but I don't know for fact.

Q. Is alcohol consumption a risk factor for having a low-birth-weight baby?

A. Yes.

Q. Is drug abuse a risk factor for having a low-birth-weight baby?

A. It would make sense.

Q. Do you know who -- is there a disparity in the incidence of low-birth-weight babies among whites as compared to blacks?

A. I believe so.

Q. Which racial group has the higher incidence of low-birth-weight babies?

A. African-American women.

Q. For each of the -- what I'd like to do

now is for each of the diseases that's listed on Exhibit 11, I'd like you to tell me what the other risk factors are for those conditions to the best of your memory as we sit here today, and we need to break it down by age group. Let's start with coronary heart disease. Could you please tell me what the other risk factors are for coronary heart disease are that you --

A. High cholesterol, sedentary lifestyle, obesity. You mean other than smoking?

Q. Yes. They're on the list because smoking's associated. Anything else for coronary heart disease?

A. Did I say hypertension?

Q. I don't believe you did.

A. Okay. Hypertension.

Q. Anything else that you can think of?

A. Not off the top of my head.

Q. How about for COPD? What are the risk factors for COPD other than smoking?

A. There is a form of COPD that's inherited. It's a small amount of all the COPD. There are a few kinds of occupational diseases that will lead to this picture of illness. That's all I can think of.

Q. What are the risk factors for cancer of the lip?

A. Lip, oral cavity, and pharynx.

Q. Thank you. I wasn't sure whether it was --

A. Chewing tobacco, as well as smoking. I don't know, other than that.

Q. All right. What are the other risk factors for cancer of the larynx?

A. I believe for cancer of the larynx and esophagus, alcohol is also a risk factor.

Q. Anything else for cancer of the larynx?

A. I don't know.

Q. Anything other than alcohol and tobacco that's risk factors for cancer of the esophagus?

A. Not that I can think of.

Q. What are the risk factors for lung cancer other than smoking?

A. Radon exposure. As I understand it, Uranium miners are more likely to get lung cancer.

Q. Any other risk factors that come to mind?

A. Not that I can think of.

Q. Pancreatic cancer? Any risk factors?

A. I don't know.

Q. And the last on the list is cardiovascular disease; is that right?

A. Cerebrovascular.

Q. Cerebrovascular?

A. Stroke.

Q. What are the other risk factors for cerebrovascular disease?

A. Hypertension would be a risk factor for that, as well as, I'm sure, diet is part of that as well.

Q. Anything else that you can think of?

A. No.

Q. Doctor, the -- going back to Exhibit 2, at the -- at the very top, again, the third line down, it says that you're expected to testify concerning, quote, "the negative impact that tobacco use has on the public health of the Mississippi population," close quote. We've talked about a number of things here today. We talked about mortality, for example. Is there any negative impact of tobacco use on the public health of the Mississippi population about which you are expected to testify other than mortality?

A. Well, as I said before, if I say anything about morbidity statistics, it will be

from National estimates of the Mississippi population, unless I can find some other way of coming up with morbidity data.

Q. Any other negative impacts that you expect to testify about?

A. Other than morbidity and mortality?

Q. Yes, ma'am.

A. Not that I can think of.

MR. MIKHAIL: She has been going through a series of questions that you have asked her about the smoking being a risk factor to various diseases.

MR. BIERSTEKER: Yeah, the mortality. I guess some others, too.

MR. MIKHAIL: Right. I didn't want you to narrow it in scope simply to the mortality and morbidity, even though all that fits into the mortality issue as well.

MR. BIERSTEKER: Well, I think -- I'm with you.

MR. MIKHAIL: I understand. I just want to --

MR. BIERSTEKER: Off the record.

[OFF THE RECORD.]

[EXHIBIT NO. 15 WAS MARKED AND MADE A

PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, I have handed you what's been marked as Exhibit 15, and it appears to be some Minutes from the Mississippi Council for Tobacco-Free Society Advisory Committee Meeting. It does not show you in attendance, but the second to last paragraph on the page does mention you. Does this document -- well, let me ask: Did Cheryl Grubbs or Charlotte McHenry ever suggest that you investigate whether the Mississippi State Health Insurance Program for employees should charge a higher premium to smokers?

A. This was in July of 1992?

Q. That's the date of the document, yes.

A. I don't remember them approaching me with that, although they might have approached me with it, and I said, "You need to talk to somebody else." I'm not sure. I don't recall that.

Q. You don't recall them approaching you?

A. No.

Q. Have you ever considered whether the State Health Insurance Program should charge a higher premium to smokers?

A. I've never thought about it.

Q. Why not?

MR. MIKHAIL: I'm going to let her answer it, but I'm going to object. That's beyond what she's being proffered as an expert in, setting insurance rate for State employees, health care plan. She can try, but I'm going to object. Well, she answered your question that she doesn't recall being --

MR. BIERSTEKER: That's fine.

MR. MIKHAIL: -- approached, and if she had been, she would have referred them to someone else. We're going to get lost if we keep going down this road.

MR. BIERSTEKER: That's all right. I just had a few questions.

THE WITNESS: Why haven't I thought about that?

Q. (By Mr. Biersteker) Yeah.

A. It never occurred to me, and I've never -- I have never dealt with the insurance -- the State insurance. I wouldn't even know who to talk to.

Q. Well, if Ms. Grubbs came to you tomorrow with this suggestion, to whom would you refer her?

MR. MIKHAIL: Object to the form. You

can try to answer it.

THE WITNESS: Probably Theresa Hanna, who is part of the -- deals with State insurance.

Q. (By Mr. Biersteker) Doctor, you believe that smoking presents health risks, don't you?

A. Yes.

Q. In fact, you believe that it causes many diseases, right?

A. Yes.

Q. How long have you believed that?

A. As long as I can remember.

Q. Did you believe it in childhood?

A. I can remember marking my parents' cigarettes with a red line because we heard on television that if you only smoked half a cigarette there was less risk of disease.

Q. Were you in grade school at that time?

A. Yes.

Q. So that would have been in the early 1960s roughly?

A. Yes.

Q. In the performance of your official duties for the State of Mississippi, have you ever relied upon anything that the tobacco industry said about smoking and health?

A. Not that I know of.

Q. Have you ever heard any employee or official of the State of Mississippi express doubts that smoking causes disease?

A. Any employee?

Q. Employee or official of the State of Mississippi.

A. I don't remember anything like that.

Q. Do you know of any employee or official of the State of Mississippi who has relied upon anything said by the tobacco industry concerning smoking and health in the performance of his or her duties?

A. I don't think so.

Q. Have you ever testified before the Mississippi Legislature?

A. No.

Q. Have you ever prepared somebody else to testify before the Mississippi Legislature?

A. I've given Dr. Thompson information, when he wanted it, to go testify. I don't think I've ever given him anything about smoking.

Q. Without going into too much detail, what were the subjects upon which you provided information to Dr. Thompson in order to help him

prepare to testify before the Mississippi Legislature?

A. Oh, shoot, I don't know. I can't remember specifics, but it was probably information about numbers of cases of diseases.

Q. Have you ever sent reports to the Mississippi Legislature?

A. I don't think so.

Q. Have you ever met with individual legislators to express your views or the views of the Mississippi State Department of Health on proposed legislation and regulations?

A. Judy Moulder, who runs the Cancer Registry -- I believe it was Judy -- and I met with -- let me make sure it was Judy. Some other person from the Health Department who I can't remember and I met with one of the legislators to try and work out the proposed legislature for the authority for the Cancer Registry.

Q. In a nutshell, what was your rationale for wanting to have a Cancer Registry?

A. All we have currently for data on cancer in Mississippi is mortality data, and we get questions pretty often from individuals in this state about cancer in the neighborhood, and one of

the ways of being able to look at whether or not what's in their neighborhood is unusual or whether or not there certainly is an increase in a certain kind of cancer in a certain area is by using Cancer Registry, and then to be able to look at preventable cancers and see when we can try and work on cancer prevention activities.

Q. Did you hope that your views would persuade the legislators with whom you met?

A. Actually, the lady we met with whose name I had forgotten wanted a Cancer Registry; she just needed some help with the wording regarding the legislation.

Q. Is there anything wrong, in your view, with individuals or corporations communicating their views on subjects of interest to them to elected representatives of the State of Mississippi?

MR. MIKHAIL: Object as being outside the scope of what she's offered to testify about, but I'll permit her to answer.

THE WITNESS: It's a complicated question.

Q. (By Mr. Biersteker) It's complicated.

MR. MIKHAIL: Same objection.

THE WITNESS: As an employee at the Health Department, I don't go to the Legislature unless I'm told to by my boss or my boss's boss, and then what I take with me is the opinion of the Health Department. As far as anyone else expressing their opinion to the legislators, I don't think that's wrong. I think that sometimes the interest of the public is not served.

Q. (By Mr. Biersteker) Why wouldn't the interests of the public be served? Do you have specific examples?

A. I'm really not sure enough about how the Legislature and -- how the Legislature works and how laws are made to answer that well.

Q. Okay. Are there any data that suggests that Mississippians are unaware smoking poses serious health risks?

A. I don't think so.

Q. Are there any data to suggest that Mississippians somehow underestimate the health risks of smoking?

A. I don't know. I've not seen anything.

Q. Is there any health risk about which Mississippians are more aware?

A. Are more aware than other groups?

Q. Compared to smoking.

A. Oh. I don't know.

Q. Are there any data for any year on seat belt use or nonuse among Mississippi Medicaid recipients?

A. Not that I know of among Medicaid recipients in particular.

Q. Are there any data that refer to seat belt use or nonuse among State employees?

A. I don't think so.

Q. More generally, are there any demographic data concerning State employees and comparing them to the general population in the state in terms of their racial composition or age or sex?

A. I don't know.

Q. Are there any data on seat belt use or nonuse among recipients of unfunded hospital care in Mississippi?

A. I don't think so.

Q. Are there any data on the percentage of people who are overweight among Mississippi Medicare recipients -- Medicaid. Excuse me. Start over. Are there any data on the percentage of people who are overweight among Mississippi

Medicaid recipients?

A. I don't think so.

Q. Are there any data on the percentage of people who are overweight among State employees of Mississippi?

A. I don't think so.

Q. Are there any data on the percentage of people who are overweight among the unfunded -- the recipients of unfunded hospital care?

A. I don't think so.

Q. Are there any data on the marital status of people who are participants in Medicaid?

A. I'm not sure.

Q. Where would you go to find out?

A. Medicaid.

Q. Are there any data on the marital status of people who are State employees?

A. There might be. I'm not sure.

Q. Where would you go check?

A. The State insurance people.

Q. Are there any data on the marital status of people who are recipients of unfunded hospital care?

A. I don't think so.

Q. Are there any data at all on who the

recipients of unfunded hospital care in the State of Mississippi are?

A. I don't know.

Q. When you were looking for data for Dr. Burns, did you look for anything other than dollars expended?

A. I do know that it was by disease, and I'm not sure what other factors were there.

Q. Are there any actual data on the income level of people who are on Medicaid in Mississippi?

A. There might be. I don't know.

Q. Are there any data on the income level of State employees?

A. Probably, but I don't know.

Q. Who would you ask about that one?

A. The same person I referred to earlier, Theresa Hanna.

Q. Who is Theresa Hanna? You answered this, but I'm not sure.

A. She used to be with the Health Department in Policy and Planning and is now with the State insurance.

Q. Mississippi Comprehensive Health Plan? DFA, Department of Finance and Administration?

A. No.

Q. I've exhausted my store of knowledge about Mississippi Government.

MR. MIKHAIL: If you know, answer; if you don't, don't guess.

THE WITNESS: No.

Q. (By Mr. Biersteker) Are there any data on people who are recipients of unfunded hospital care?

A. I don't know.

Q. Are there any data on the educational levels of people in the State of Mississippi?

A. I don't know.

Q. Are there any data on the educational levels of State employees in Mississippi?

A. I don't know.

Q. Are there any data on educational levels of individuals who are recipients of unfunded hospital care in hospitals of Mississippi?

A. I don't know.

Q. Are there any data on the age, sex, and race of State employees?

A. I'm not sure.

Q. Are there any data on the age, sex, and race of recipients of unfunded hospital care?

A. I don't know.

Q. Have there been any changes in the prevalence of seat belt use or nonuse in the State of Mississippi over time?

A. I think it's increased some.

Q. What? Use?

A. Yes.

Q. Do you know for what years data exists on seat belt use and nonuse in the State of Mississippi?

A. It would be in the BRFSS data. It's not in there.

Q. No. You've summarized data from 1991 through 1995?

A. Right.

Q. Do you know if Mississippi participated in earlier iterations of BRFSS?

A. They did something. BRFSS was done in Mississippi in 1990, but I don't think it was the same way it was done in the years following. I think it may have just been a smaller survey. I don't have the 1990 data.

Q. What accounts for -- let me ask you this: Have you conducted any investigation, or has the Mississippi Department of Health conducted

any investigation, as to the reasons why seat belt use has increased in the state?

A. No.

Q. Does Mississippi have a law that requires people to wear seat belts?

A. Yes.

Q. Do you know approximately when that legislation was passed?

A. Pretty recently, but I'm not sure what year.

Q. Have teen pregnancy rates in the state of Mississippi been going up or down?

A. I'm not sure.

Q. Have the incidence of sexually transmitted diseases in the state been going up or down -- has the incidence of sexually transmitted diseases been going up and down?

A. The incidence of syphilis has gone up until this year, when it has started to go down.

Q. Has the percentage of people in Mississippi who are overweight gone up or down over the -- over the life of the BRFSS data?

A. I don't know.

Q. Has the percentage of people with medical insurance gone up or down over time?

A. I'm not sure.

Q. As a general question, if I may try to do it this way --

MR. MIKHAIL: You mean without me pouncing on you?

MR. BIERSTEKER: Yes.

Q. (By Mr. Biersteker) Do you have any information about the prevalence of seat belt use, the percentage of people who are overweight, the percentage of people with medical insurance for any years other -- strike that. Do you have any data concerning prevalence of seat belt use, percentage of people overweight, percentage of people with medical insurance other than the BRFSS data?

A. I've not looked at any other data, but I'm sure there are National surveys like NHANES that have got state-specific data.

Q. You think NHANES has state-specific data?

A. I think it might.

Q. Any other data sources that you know of that might address these variables of seat belt use, overweight, medical insurance in the state of Mississippi?

A. The Cancer Prevention Survey may have something about overweight in it, but I'm not sure.

Q. Do you know in what year that was conducted?

A. As I understand, it's still going on.

Q. It's longitudinal?

A. Right.

Q. Do you know when it was commenced?

A. Started in the mid to late '80s. No, I don't remember when it started.

Q. That's all right. You don't have to look. Do you have any information about changes in income levels in the State of Mississippi over time?

A. No.

Q. Do you know if the State keeps that information?

A. I'm not sure.

Q. Are you aware of any data other than the BRFSS data concerning changes in general educational levels within the state of Mississippi?

A. I think that information probably exists somewhere, but I don't know where it is.

Q. Do you have any data concerning the age distribution of the Mississippi population?

A. Yes.

Q. Where is that data found?

A. From the -- every Vital Statistics in Mississippi is going to have either the last census data or projection from it.

Q. So they have actual data for every ten years?

A. Right.

Q. And then for the interim years they make projections?

A. Right.

Q. Does that -- do the Vital Statistics census data include information on the racial composition of the Mississippi population generally?

A. Yes.

Q. Does it include information about the sex of the Mississippi population generally?

A. Yes.

Q. Have there been changes in Mississippi in the percentage of health care expenditures incurred for hospital care over time?

A. I don't know.

Q. Does the State track that kind of data?

A. I don't know.

Q. If you wanted to know, who would you ask?

A. The Mississippi Hospital Association.

Q. Has the percentage of total medical care expenditures spent for ambulatory care in the state of Mississippi changed over time?

A. I don't know.

Q. If you wanted to know the answer to that question, who would you ask?

A. You might have to go several places. One would be the Mississippi Hospital Association. I'm not sure where you get ambulatory care data.

Q. Have there been changes in the percentage of medical care expenditures incurred for home health care in Mississippi over time?

A. I don't know.

Q. Isn't home health care a relatively recent phenomenon?

A. It's been around since I've been with the Health Department.

Q. Since 1988?

A. Yes.

Q. Would you go to the Hospital Association for data related to home health care, too?

A. No. I think there's a Home Health Association, and then our Policy and Planning office might have some information on that.

Q. Have there been changes in the percentage of medical care expenditures incurred for prescription drugs over time in Mississippi?

A. I don't know.

Q. Have there been changes in the relative prices of treating smoking- and nonsmoking-related diseases in the United States?

A. I'm sure cost has gone up for medical care.

Q. The relative prices of treating smoking- --

A. Versus.

Q. -- compared to nonsmoking-related diseases?

A. Oh, I don't know.

Q. Do you have data regarding relative prices of treating smoking- or nonsmoking-related diseases in any geographic area or some population in the state of Mississippi?

A. Not that I know of.

Q. Do you know who might have that data?

A. I don't know.

Q. Have there been changes in the relative incidence of smoking- versus nonsmoking-related diseases over time in the United States?

A. Lung cancer has increased.

Q. Over what time period?

A. There's a lovely chart in here.

MR. MIKHAIL: Do you want to know?

MR. BIERSTEKER: Yeah.

MR. MIKHAIL: The last time she reached for a book you said, No, that's all right.

MR. BIERSTEKER: I changed my mind.

Q. (By Mr. Biersteker) All right. This is cancer and mortality data, right?

A. Right.

Q. Of course there is a difference between cancer mortality and cancer morbidity, at least with respect to some forms of cancer, right?

A. Sure.

Q. Apart from lung cancer --

MR. MIKHAIL: Before you leave that chart, make sure the record reflects what page out of that book you're looking at.

MR. BIERSTEKER: Absolutely. For the

record, this is Chronic Disease Epidemiology and Control by Brownson, Remington, and Davis, published by the American Public Health Association in 1993, and the particular chart that Dr. Currier referred to is found on page 139.

MR. MIKHAIL: Thank you.

Q. (By Mr. Biersteker) There are no data except for 1996 in Mississippi about the relative incidence of different kinds of cancers, right?

A. Incidence, that's right.

Q. Are there mortality data relating to the different kinds of cancers in Mississippi --

A. Yes.

Q. -- over time?

A. Yes.

Q. Are there data for mortality regarding diseases generally --

A. Yes.

Q. -- in the state of Mississippi over time?

A. Yes.

Q. Are those data part of the Mississippi Vital Statistics?

A. Yes.

Q. Has anybody analyzed those data to

determine whether or not there have been changes in the relative incidence -- strike that. Has anybody analyzed those data to see whether or not mortality rates for smoking- versus nonsmoking-related diseases have changed over time?

A. Not for smoking versus nonsmoking.

Q. Are there any data at all -- Mississippi is a poor state, isn't it?

A. Yes.

Q. In fact, it's the poorest state in the Nation?

A. I believe so.

Q. And that's -- is it a poor state in the Nation based upon per capita income?

A. I think so.

Q. Is it also a poor state in the Nation based on a median income for a family of four?

A. I don't know that, but I would believe it.

Q. Is Mississippi one of the most poorly-educated states in the Nation?

A. I would guess so, but I don't have statistics on that.

Q. Is the quality of housing in the state

of Mississippi well below the National average?

A. Yes.

Q. Each of these factors -- poverty, poor education, poor housing -- adversely affects the status -- the health status of the citizens of the state, doesn't it?

A. Yes.

Q. One way that poverty could affect health status is that income gets spent on food, clothing, shelter, and it's difficult to afford adequate health care, right?

A. Right.

Q. Another way that poverty could affect health status, I suppose, would be to make -- to increase the risk of infectious diseases such as tuberculosis?

A. Yes.

Q. And treating acute conditions such as tuberculosis or sexually transmitted diseases or measles zaps health care dollars that the State might otherwise be able to dedicate to chronic disease treatment and prevention, right?

A. I don't know. A lot of our TB control, which actually treats -- we treat TB patients, and a lot of our STD money is Federal money.

Q. While separate and apart from money spent by the State, does it -- does it consume resources of the health care providers to attend to these acute conditions and perhaps be able to devote less time to chronic conditions and prevention?

A. I'm sorry. Can you repeat that?

Q. Yeah. Sure. If you've got a population that's got a high incidence of acute condition such as tuberculosis, measles, influenza, meningitis, hepatitis, doctors may be spending a lot of time treating those kinds of conditions and less time counseling patients and advising them on how to change their lifestyles to avoid chronic conditions later in life?

A. Most of the things you mentioned are things that are taken care of by the Health Department, TB -- we give flu shots, although you're correct; we don't treat patients with the flu. I don't think poverty has a lot to do with flu. I'm not sure of that. In an individual practice, if you had a whole lot of acute illness, yes, it would mean you had less time to spend on preventive counseling.

Q. Mississippi's new case rate for

tuberculosis has been among the highest in the Nation for many years, hasn't it?

A. It's -- actually, when everybody else's rate was going up, ours was not.

Q. Why don't we look at Exhibit 14, which is the State Health Plan for 1995, the fat one.

A. Okay.

Q. If you can turn to page 8135 under the heading Tuberculosis, doesn't the State Health Plan report that Mississippi has exceeded the National new case rate for tuberculosis in 34 of the last 36 years?

A. Yes.

Q. And that at least in 1993, Mississippi had the 13th highest rate of tuberculosis among all the states?

A. Yes.

Q. Mississippi devotes less than one cent on every dollar that it spends to altering the lifestyles of its citizens; isn't that right?

A. I don't know.

Q. If that's what the State Health Plan reports, would you dispute it?

A. No.

Q. Do the poor also have more limited

access to health care?

A. Yes.

Q. Is that also true of people who live in rural portions of the state of Mississippi?

A. I believe so.

Q. Are those counties generally underserved? There's not enough doctors and health care providers to go around?

A. Yes.

Q. If people aren't seeing a doctor regularly, are they more likely to wait until their condition becomes more severe, then have to go to the emergency room or to the hospital?

A. Probably.

Q. Turn to page 8140 of the Mississippi Health Plan 1995, Exhibit 14. There's a chart in the middle of the page there that identifies key health problems across the life-span of blacks in Mississippi. Did you have any input into devising this table?

A. No.

Q. Would you disagree with the characterization that this is a list of key health problems in the black population in Mississippi?

A. Well, it depends on how you came up with

this list of problems.

Q. I didn't.

A. Nor did I.

Q. Okay.

A. It depends on how this list was formulated. If one is looking at health problems that are dis -- that disproportionately affect the blacks in Mississippi, that would be different than health problems that affect the blacks perhaps more than or less than whites in Mississippi. If the second is true, then they left off smoking.

Q. I saw that it was not included. One reference I thought was puzzling is it lists as one of the four problems during childhood years, cancer. What cancer occurs in childhood years in Mississippi with some -- with sufficient frequency to justify inclusion in a table like this?

A. I don't know. There are several cancers that occur in childhood, but I don't know what -- what made them list it in here.

Q. If you were going to add smoking to this table, for which age categories would you add it?

A. All four.

Q. There's five. Add for all five?

A. Oh, infants. Yes.

Q. What is your basis for adding it for the teenage/young adult years?

A. Because of what you addressed earlier. This is very often when people start smoking.

MR. MIKHAIL: Are we at a good stopping point for a five-minute break?

MR. BIERSTEKER: We sure are.

MR. MIKHAIL: I've got several phone calls to make, but it won't take five minutes.

MR. BIERSTEKER: There is a chance if we end right at 5:00 -- probably not, but there is a chance we could finish up today if we went a little past 5:00.

[OFF THE RECORD.]

[SHORT BREAK.]

[EXHIBIT NO. 16 WAS MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, I have marked as the last exhibit the book that you earlier advised you had not heard of, the Health Care State Rankings, 1996, Health Care in the 50 States. It is the Fourth Edition, and I have included excerpts from that book, and I just wanted to ask you about the excerpts that are in

the exhibit, so let me hand you Exhibit 16.

MR. MIKHAIL: You want to put that rubber band around this big book, Peter?

THE WITNESS: Did I keep it?

MR. MIKHAIL: No, he's got that right there.

MR. BIERSTEKER: I can multi-task.

Q. (By Mr. Biersteker) Doctor, I wanted to ask you about some of the tables that appear in this book, and almost all of them site U.S. Department of Health and Human Services, Centers for Disease Control, and other governmental sources of data. And the first page I asked you to turn to is page 27 -- they should be in order, for a change -- page 27, and we talked about this earlier, but at least based on 1993 data, it appears as if Mississippi has the highest birth rate among teenage women; is that right?

A. Yes.

Q. Turning to the next page, page 49, Mississippi ranks in the bottom quintile of the states -- 41st in the percentage of mothers who get prenatal care in the first trimester of their pregnancy, at least based on 1993 data, collected, again, by the U.S. Department of Health and Human

Services, right?

A. Yes.

Q. The next page, page 81 of the book, indicates that Mississippi is the sixth highest state in the Nation in terms of overall death rate in the population, based on 1990 data collected by the U.S. Department of Health and Human Services, right?

A. Yes.

Q. The next page, page 87, indicates that Mississippi has the second highest infant mortality rate in the Nation, at least based on 1994 data collected by the U.S. Department of Health and Human Services, right?

A. Yes.

Q. The next page I wanted to ask you about is the estimated death rate by bladder cancer in 1996, and Mississippi has a relatively low rate for bladder cancer. It ranks 48th among the 50 states in the death rate by bladder cancer, according to the data presented here, right?

A. Yes.

Q. Similarly, on page 131, talks about atherosclerosis death rates, Mississippi ranks 42nd in the 50 states for the death rate by

atherosclerosis, at least based on 1992 data, right?

A. Yes.

Q. That's a relatively low rate compared to the rest of the Country, right --

A. Right.

Q. -- for diseases of the heart, generally; however, Mississippi, based on 1993 data, has the fourth highest death rate of all the 50 states, right?

A. Yes.

Q. The next page, page 149, shows that Mississippi has the third highest death rate by syphilis based on 1992 data in the Nation, correct?

A. Yes.

Q. The next page, page 151, indicates that Mississippi has the second highest death rate by tuberculosis, based on 1992 data, in the Nation, right?

A. Yes.

Q. The next table, it appears on page 153, and it shows that Mississippi has the highest death rate by injury, at least based upon 1992 data, in the Nation, right?

A. Yes.

Q. Page 155 indicates that Mississippi has the highest death rate by accidents and adverse events in 1993; is that right?

A. Yes.

Q. Similarly, Mississippi has the highest death rate by motor vehicle accidents, at least based on 1993 data, right?

A. Yes.

Q. Mississippi has -- we're on page 159 -- the second highest death rate by homicide in the Country based on 1993 data, right?

A. Yes.

Q. On page 231 we talked about health care access. Mississippi has the seventh highest percent of the population without any health insurance, based on 1994 data, compared to the other states; is that right?

A. Yes.

Q. Is the next document page 241?

A. Yes.

Q. Mississippi ranks 47th among the 50 states in terms of the percentage of people who were enrolled in health maintenance organizations in 1994, right?

A. Yes.

Q. On page 251, Mississippi ranks near the bottom, 47th of the 50 states, for per capita personal health care expenditures in 1993, right?

A. Yes.

Q. On the other hand, page 257 suggests that -- well, shows that, at least based on 1993 data, Mississippi had the fifth highest hospital expenditure -- excuse me. Let me say this again. I messed it up. Do you see page 257 from the book, Doctor?

A. Yes.

Q. Does it indicate that Mississippi was among the top five states in the percentage of personal health care expenditures spent on hospitals in 1993?

A. Yes.

Q. On the other hand, for per capita expenditures for physician services in 1993, Mississippi ranked 49th, near the bottom of all the states; is that right?

A. Yes.

Q. Spent a very relatively low amount on physician care, right?

A. Per capita, right.

Q. Per capita. On page 347, in terms of estimate bladder cancer cases in 1996, Mississippi does very well. It has the second lowest incidence of bladder cancer cases. Do you see that?

A. Yes.

MR. MIKHAIL: We're the first state to file suit against the tobacco industry for health care expenditures, however.

MR. BIERSTEKER: That wasn't in this book.

Q. (By Mr. Biersteker) If you'll turn to page 399, Mississippi has the highest syphilis rate in the Nation in 1995?

A. Yes.

Q. By a very wide margin?

A. Yes.

Q. Turning to the next page, the percentage of the population lacking access to primary health care in 1994, Mississippi has the highest percent of the population that lacked access to primary health care in 1994; is that right?

A. Yes.

Q. The next table is the percent of adults who smoke in 1994. You see that?

A. Yes.

Q. Mississippi's about -- well, it's about in the middle, actually. Mississippians smoke slightly less than the average state; is that right?

A. Yes, for 1994.

Q. Right. On page 494, the percentage of adults who are overweight in Mississippi is the highest in the Nation, right?

A. Yes.

Q. And if you turn to the next page, 494 -- I love this one -- Mississippi ranks in the bottom quintile in the percentage of overweight adults who are actually trying to lose weight, right?

A. Yes.

Q. On 496, we have the percentage of adults who live a sedentary lifestyle. Again, Mississippi residents were the sixth most sedentary in the Nation?

A. Yes.

Q. And in terms of the percentage of adults who have regular and vigorous physical exercise in 1994, according to the U.S. Department of Health and Human Services, Mississippi had the second lowest percentage among those states who are

reporting data, right?

A. Yes.

Q. Mississippi ranked dead last among the percentage of adults who consumed fruit and vegetables each day in 1994 among the states reporting data. There's no data for Rhode Island; is that right?

A. Yes.

Q. And in terms of seat belt use, Mississippi again ranked near the bottom in terms of the percentage of people in the state who use their seat belts, based on 1994 data, right?

A. Yes.

Q. In light of the data we have reviewed, would you agree that Mississippi is not representative of the Nation as a whole in terms of its public health?

A. No.

Q. You would not?

A. No. I think there are a lot of examples in here that you have given that would not be dead last or at the bottom if you looked at it by race and by sex; infant mortality, for example.

Q. All right. Go ahead.

A. Our infant mortality in African-American

women is not anywhere near last. I don't know what it is. But it's certainly not last. And if you look at whites separately from African-Americans, neither one are at the very bottom.

Q. For infant mortality?

A. Right, as an example.

Q. Well, if whites in Mississippi, for example, have an infant mortality rate that's comparable to whites elsewhere in the United States, and if black women in Mississippi have an infant mortality rate -- I guess it's actually the women who have the rates -- if black infants in the state of Mississippi have an infant mortality rate that is comparable to black infants in the Country as a whole, is the sole reason that Mississippi finishes second to the bottom in terms of its infant mortality rate that the population in Mississippi has -- is disproportionately black?

A. That is a large reason, yes.

Q. Is that true of any of the other examples that I have given, that if you compared these rates based on age -- I mean based on race and sex, that Mississippi would be representative of the United States as a whole?

A. In some of these things, we'd be closer to the middle, yes.

Q. Have you examined this --

A. No.

Q. -- with respect to any of these variables --

A. No.

Q. -- other than infant mortality?

A. No.

Q. Have you examined it for infant mortality?

A. I've only heard it.

Q. Is it true that without adjusting -- strike that. Would it be inappropriate to compare Mississippi -- hang on just a minute. I'll get this right. Certainly you would agree, based on these statistics, that --

MR. MIKHAIL: These statistics meaning the ones in Exhibit 16?

MR. BIERSTEKER: Correct.

MR. MIKHAIL: All right.

Q. (By Mr. Biersteker) That Mississippi as a whole, without adjusting for racial differences, is not representative of the United States as a whole?

A. I think if you took -- we are certainly a very poor state, and I think if you took very poor rural areas anywhere in the Country you would see statistics like this.

Q. I appreciate that. I don't know whether it's right or not, but I'm not sure it answers my question. And that is, without taking into account peculiar racial distribution of the population in Mississippi and its disproportionately rural and poor population, and if you just look at averages for the state of Mississippi, it is not representative of the United States as a whole, is it?

A. Certainly we are at one end as opposed to being in the middle.

Q. Is it representative on the whole of the United States as a whole or not?

A. It's -- it's not average. I mean, we're part of the United States.

Q. I know, but I asked if it was representative. Is the state of Mississippi, on the whole, representative of the United States in terms of its experience relating to variables like those in Exhibit 16?

A. It is different from the United States

average, that's right.

Q. Does that mean it's not representative?

MR. MIKHAIL: Peter, I think she's trying to answer your question the best she can. Don't put words in her mouth.

MR. BIERSTEKER: I'm not. That's ridiculous. I think I'm entitled to an answer to the question I asked. If the answer is I don't know --

MR. MIKHAIL: But you're following-up.

MR. BIERSTEKER: I'm not sure average means the same thing.

Q. (By Mr. Biersteker) Well, let me ask this question: Does average mean the same thing to you as representative?

A. No.

Q. Okay.

A. I wouldn't -- if what you're asking is would you use Mississippi as an example of what the United States is like on a whole, no, I wouldn't.

Q. Do you believe that the state of Mississippi is facing a public health crisis?

A. In what respect?

Q. With respect to the variables discussed

in Exhibit 16.

A. I think that -- I'm not sure that "crisis" is the right word. I think there are a lot of areas in public health in Mississippi that need attention.

Q. Do those areas include teen pregnancy, syphilis, access to health care, accidents, homicides?

A. Yes.

Q. Some of the other things? And a lot of variables we talked about in Exhibit 16 don't have anything to do with smoking, do they?

A. That's correct.

MR. BIERSTEKER: Why don't we take a short break. I may have just a few more questions, but I want to have some of the answers read back to me by the reporter, if I could, during the break.

[SHORT BREAK.]

Q. (By Mr. Biersteker) I don't mean to be difficult, but my sense is I didn't get an answer to the question I had asked a couple of times before we took our short break, and that was whether or not the state of Mississippi's public health experience as reflected in data like those

in Exhibit 16 is representative of that of the Nation or not, and I believe you earlier answered that it was not average but then said that average wasn't the same thing as representative, and I would appreciate if you would try to respond to the question. And that is, again: Is the state of Mississippi on the whole representative of the United States in terms of public health variables like those we discussed in Exhibit 16?

A. Many of the public health variables in Mississippi are worse than the Country as a whole. I'm not sure what you mean by representative.

Q. Well, you're an epidemiologist. What does it mean to you?

MR. MIKHAIL: I think it's only fair that you tell her what you mean by your question, first.

MR. BIERSTEKER: No, Charles.

MR. MIKHAIL: You're asking her to frame the question. You're asking the question, Peter, and you're asking her whether it's representative. Define "representative" for her before she answers it.

MR. BIERSTEKER: I'm --

MR. MIKHAIL: Don't tell the witness.

MR. BIERSTEKER: You're telling me what to do, and I don't appreciate it. I'm being perfectly fair to the witness. I'm asking her if she's got a definition.

Q. (By Mr. Biersteker) Is there a definition of "representative" that you employ as an epidemiologist?

MR. MIKHAIL: Before you answer, definition of what?

MR. BIERSTEKER: Of "representative."

MR. MIKHAIL: All right. Fine. You can answer that. If you have an answer as an epidemiologist of the word "representative." If you do.

THE WITNESS: Is it like the rest of the Country? Is that what you're asking?

Q. (By Mr. Biersteker) Well, no. What I'm asking now is a different question.

A. Okay.

Q. Have you ever used the term "representative" in your work as the State Epidemiologist or in your studies of epidemiology? Let me ask it better. Do you have an understanding of the term "representative" as

it is used by epidemiologists?

A. I think so. But now that you're asking me -- you asked me earlier if I thought it meant average. Now that you're asking me, I can't think of an accurate absolute definition. It probably means to me average plus.

Q. Let me ask it this way: If you wanted to obtain a sample of data that you could extrapolate to the Nation as a whole on public health variables such as the kind we've discussed here in Exhibit 16, would you succeed if you took a random sample of Mississippians?

A. Probably not.

Q. Is the converse also true? If you took a representative sample of people in the United States, would it accurately portray the experience of Mississippians concerning public health variables like those discussed in Exhibit 16?

A. Probably not.

MR. BIERSTEKER: Give me one minute. I think I'm finished. I have no further questions.

MR. MIKHAIL: Does Kathleen have any?

MS. MULLERY: No, I don't have any.

MR. BIERSTEKER: You have none?

MR. MIKHAIL: I'm not going to ask any

today. I will ask them at trial.

MR. BIERSTEKER: Okay. Well, thank you. We're finished. You need not come tomorrow.

[OFF THE RECORD.]

MR. BIERSTEKER: Why don't we mark these.

[EXHIBIT NOS. 17 THROUGH 24 WERE MARKED AND MADE A PART OF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, there were some additional documents that you brought with you to the deposition today that we had not discussed during the course of your deposition, and before we left, I just wanted to identify them for the record. One of the documents that will not be made an exhibit to the record is Vital Statistics Mississippi 1995 from the Mississippi Department of -- State Department of Health; is that correct?

A. Yes.

MR. BIERSTEKER: Charles, do you know if this document was produced to us? I imagine it was.

MR. MIKHAIL: I'm sure it was. It looks familiar to me.

MR. BIERSTEKER: If it has not been

produced, we will just give you a call.

MR. MIKHAIL: You won't give us a call. You'll file a Motion to Compel.

THE WITNESS: I think they've got these back to however long they've been produced.

Q. (By Mr. Biersteker) The remaining documents have been marked with exhibit stickers, and what I'd like to do is briefly go through them and identify them on the record, if we may. The first one is marked as Exhibit 17, Doctor. Could you just describe what that document is for the record, please?

A. It's age-adjusted mortality rates from some specific causes by race and gender in Mississippi from 1980 through 1995.

Q. And is this based on Vital Statistics data?

A. Yes.

Q. The next exhibit is Exhibit 18. Could you please state for the record what that exhibit is.

A. Years of potential life lost before age 65 per 100,000 population by race and gender for some selected causes of death in Mississippi residents from 1980 through '95.

Q. And is this also based on Vital Statistics data?

A. Yes.

Q. How did you select the diseases to include in Exhibits 17 and 18?

A. Dr. Thompson selected them.

Q. I see. Do you know on which basis he selected them?

A. No.

Q. I see that at least on Exhibit 18 there is some handwriting with some numbers -- Exhibit 18, Doctor.

A. Oh, sorry.

Q. There is some handwriting with some numbers in the margins. Do you know what that handwriting refers to?

A. I wrote it, but I don't know what it means.

Q. All right. The data that I printed on the exhibit are correct?

A. Yes. Oh, yes, these are not corrections.

Q. That's what I was concerned about.

A. Yeah.

Q. The next document is a two-page document

marked as Exhibit 19, if you can describe what that is for the record, please.

A. It's mortality data from the Vital Statistics Division of 1995 deaths for Mississippians from some specific causes, by sex, for 1995.

Q. Does this correspond -- do you know how these were computed? Is this just raw numbers?

A. Right. It's just raw numbers from 1995.

Q. These are not attributable; these are just total?

A. Right.

Q. What is the second page? Continuation for additional diseases; is that right?

A. Actually, it's two of the same diseases that are on the first page but broken down into age groups.

Q. Why were those broken down into age groups? Did it just come that way, or did you request it?

A. I requested it because on the sheet of handwritten paper where I did the basic compilation and attributable risk applied to numbers, there were different population and attributable risk in the '89 Surgeon General's

Reports by age group, so I asked for these pages.

Q. I see. In order to do the calculations, you had to compare apples and apples?

A. Correct.

Q. All right. I hand you Exhibit 20, and if you could describe for me what Exhibit 20 consists of, I'll appreciate it.

A. It's 1991 BRFSS data regarding current smoking by demographics.

Q. Okay. And what is Exhibit 21?

A. The same thing for 1993.

Q. The --

A. BRFSS data.

Q. -- description of current smoking for BRFSS for 1993?

A. Yes.

Q. By different demographic factors?

A. Right.

Q. I hand you Exhibit 22. What is that?

A. The same BRFSS data for 1994.

MR. BIERSTEKER: Did we inadvertently mark two of the same thing?

MR. MIKHAIL: No. 22, 23.

MR. BIERSTEKER: I understand that, but is 23 the same as 22?

THE WITNESS: Yes.

MR. MIKHAIL: That's fine. We can drop one.

MR. BIERSTEKER: My mistake.

THE WITNESS: We may be missing 1992, however. I think you're right because it had the ages smoking --

MR. MIKHAIL: Here's the letter.

[COMMENTS OFF THE RECORD.]

Q. (By Mr. Biersteker) Doctor, we've now changed Exhibit 23. What is Exhibit 23 now?

A. 1992 smoking prevalence data from BRFSS.

Q. Summarized by different demographic characteristics; is that right?

A. Yes.

Q. Now finally I hand you Exhibit 24. Please describe what that is.

A. This is BRFSS data for 1995. Actually, it's BRFSS data for 1991 through '95 by sex and race.

Q. Is exhibit -- does Exhibit 24 reflect the actual data upon which Exhibit 4 was based?

A. The first page of Exhibit 4, yes.

Q. Okay. Are the data for the subsequent pages of Exhibit 4 summarized in any one exhibit,

or do you have to go through the data in each of the exhibits in order to compile it?

A. You have to go through each year.

MR. BIERSTEKER: Okay. Thank you very much.

MR. MIKHAIL: Thank you.

[DEPOSITION CONCLUDED AT 4:50 P.M.]

CERTIFICATE OF DEPONENT

I, MARY CURRIER, M.D., deponent in the deposition taken in the herein styled and numbered cause, certify that I have examined the foregoing 198 pages as to the correctness thereof, and that after reading said pages, I find them to contain a full and true transcript of the testimony as given by me on November 12, 1996, in Jackson, Mississippi.

Subject to those corrections listed below, if any, I find the transcript to be the correct testimony I gave at the aforestated time and place.

Page	Line	Comments
____	____	_____
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This the ____ day of _____, 1996.

_____

MARY CURRIER, M.D.

State of Mississippi
County of _____

Subscribed and sworn to before me, this the _____ day of _____, 1996.

My Commission Expires:
_____

_____
NOTARY PUBLIC

CERTIFICATE OF COURT REPORTER

I, Rhonda K. Hall, Court Reporter and Notary Public in and for the County of Hinds, State of Mississippi, hereby certify that the foregoing 199 pages contain a true and correct transcript of the testimony of Mary Currier, M.D., as taken by me in the aforementioned matter at the time and place heretofore stated, as taken by stenotype and later reduced to typewritten form under my supervision by means of computer-aided transcription.

I further certify that under the authority vested in me by the State of Mississippi that the witness was placed under oath by me to truthfully answer all questions in this matter.

I further certify that I am not in the employ of or related to any counsel or party in this matter and have no interest, monetary or otherwise, in the final outcome of this matter.

Witness my signature and seal this the 19th day of November, 1996.

RHONDA K. HALL, RPR-CSR
MS CSR NO. 1197
My Commission Expires: 8/25/98